

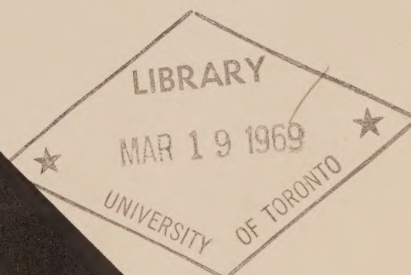
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Northwest Territories

Driver Instruction Program



Canada

Education Division
Northern Administration Branch
Department of Indian Affairs
and Northern Development
Ottawa

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TEACHERS' GUIDE

FOR DRIVER INSTRUCTION


IN THE NORTHWEST TERRITORIES

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VOCATIONAL EDUCATION SECTION
EDUCATION DIVISION
NORTHERN ADMINISTRATION BRANCH
DEPARTMENT OF INDIAN AFFAIRS
AND NORTHERN DEVELOPMENT
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Preface

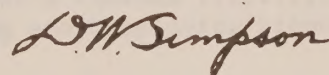
Driving an automobile in today's congested traffic is a highly skilled activity. In the horse-and-buggy days, some horses had sufficient know-how to negotiate a journey safely even if the driver did not. This is not true with the present motor car. High-powered driving, complicated traffic systems, rules and road networks present problems requiring immediate and correctly formed decisions on the part of the driver if he expects to remain alive and keep out of jail. He must decide on, and skillfully carry out, each particular traffic maneuver in a matter of seconds. To err can mean injury or death.

As automobiles came into universal use, the accident and fatality rate increased in proportion. Such staggering numbers were reached that it has become a national problem. Investigation pointed out the fact that most drivers "picked up" their driving knowledge from friends -- actually 38% taught themselves to drive. Many safety experts blame today's high accident rate on the fact that so few of our present drivers have had any organized training in this vital and skilled activity.

Many forward-looking school systems have recognized the importance of educating our future citizens as drivers and now offer courses of instruction. A comprehensive program includes classroom instruction on all the vital information needed by you as a driver and behind-the-wheel training to practice driving skills. An important part of the classroom instruction is the "psychophysical" testing program which helps to understand a driver's abilities and weaknesses so that intelligent adjustments can be made where weaknesses exist. Another important outgrowth of the classroom work is the development of correct driving attitudes and habits. By studying the personality traits of drivers habitually involved in accidents, an opportunity is given to recognize and modify any undesirable personality traits while they are still in the formative stage and prior to firm habits being established.

The results of a good driver educational program are very marked. Beginning drivers who have the advantage of a driver education course are involved in only half as many accidents as those who had not received this training.

With these ideas in mind this teacher's guide has been developed, not as an "end-all" product but as a firm foundation for future building. It is our sincere hope that this may be upgraded to develop a satisfactory program in driver education for the Northwest Territories.



D.W. Simpson,
Chief, Education Division.

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NORTHWEST TERRITORIES
DRIVER INSTRUCTION PROGRAM

PART I

AIMS	OBJECTIVES	POLICIES
1. <u>Aims</u>		
		To encourage in all communities continuous education in safe driving, and thorough specialized programmes of driver education, to teach the skills of driving as well as to develop attitudes in all drivers to drive safely at all times.
		To promote safe, efficient and rewarding use of automobiles.
		To develop pride in maintaining high standards of performance and conduct.
		To foster a strong sense of personal responsibility for the common welfare of his associates.
		To implant effective habits of co-operation.
		Driver education is a programme designed to develop the individual student's necessary mechanical ability to operate a motor vehicle safely, but subordinating mechanical ability to the development of sound attitudes, demonstrated by the student's acknowledgement of his social and moral responsibilities while operating a motor vehicle.
2. <u>Instructional Programme</u>		
	(a)	The instructor must hold a valid driver instructor's license.
	(b)	The text, SPORTSMANLIKE DRIVING, Canadian Edition, is to be the basic text. THE TEACHER'S MANUAL accompanying the text is recommended for use by the teacher.
	(c)	Classroom time for the course will be at least 25 hours.
	(d)	The actual behind-the-wheel instruction will have a minimum of 6 hours for each student if automatic transmission is used. If a standard transmission automobile is used, this figure is increased to a minimum of 8 hours.
	(e)	Students will be required to pass written tests on the work taken in connection with their course. The minimum pass mark must be 60%. A regular territorial driving test will be required to obtain an operator's license and will constitute the test of the practical part of the course.

- (f) Certificates of competence will be issued and signed by the Commissioner and District Superintendent of Schools to each trainee on successful completion of the course.
- (g) Standardized record forms prepared by the Education Division in Ottawa will be used by each school containing all pertinent information.

3. Equipment

- (a) All vehicles engaged in the practical phase of the program shall be equipped with approved seat belts. This policy shall apply to the front seat only.
- (b) All vehicles used in the instruction of this program shall be dual-controlled.
- (c) Minimum dual requirements are defined as:
 - (i) A braking device operated by a foot pedal and easily accessible when sitting on the passenger side.
 - (ii) A second rear-view mirror for the instructor's use while sitting on the passenger side.
- (d) Seat belts shall be fastened securely at all times while the training vehicle is in operation.
- (e) An identification sign or decals indicating driver training must be mounted on the front and rear of the vehicle and must be clearly visible to other vehicles approaching from the front or rear.

4. Insurance

- (a) All vehicles employed in the Program shall be adequately insured. Satisfactory proof of adequate insurance shall be furnished to the principal and instructor before any vehicle is used for instructional purposes in the Program.
- (b) Such proof may be furnished in one of the following ways:
 - (i) A certified copy of the insurance policy.
 - (ii) A certificate of insurance of limits of liability, or
 - (iii) A letter on company letterhead and signed by an officer of the insurance company, indicating limits of liability and expiry date of coverage.

5. Supervision of Driver Instruction

The standards of DRIVER INSTRUCTION must be maintained at a high level. In addition to any supervision which may be given directly by the superintendents of education, it is anticipated that the principals will see that these standards are maintained.

RESPONSIBILITIES OF SCHOOLS

RE: DRIVER EDUCATION IN SECONDARY SCHOOLS

Many students in our secondary schools will soon be driving. Studies have found that where a teenage person has had a Driver Instruction Course, he is less likely to become involved in automobile accidents. It is with this in mind, that we have become interested in this Driver Instructional Program. Each principal where Driver Instruction is to be established as an extracurricular part of the school program should officially endorse the program and undertake the following responsibilities:

1. Engage a qualified instructor or instructors.
2. Make arrangements along with the Regional Superintendent of Schools for a dual control car.
3. Make available a classroom for use in this program after regular hours.
4. See that the instructor enrolls and keeps proper records of students engaged in Driver Instruction.
5. Supervise the program to see that standards are maintained.

Most school boards use secondary school teachers already employed by the Board to teach the Driver Instruction Program and this is, undoubtedly, the best method. The use of such qualified teachers in this extracurricular activity often enables the teacher to learn more about the students and thus become more able to help them.

Where a board cannot find teachers who are willing or able to undertake this instruction, they may contract with a local qualified driver instructor or qualified person to do this. All teachers, whether teaching in class or in car must qualify by successfully completing a teacher preparation course in driver instruction.

Such courses are provided in most of the provinces each year. Behind-the-wheel instructors must, in addition, pass the commercial instructor's examination and hold a commercial driving instructor's licence.

NORTHWEST TERRITORIES DRIVER INSTRUCTION PROGRAM

PART II

GETTING THE COURSE STARTED

CREATING INTEREST

The first job is to create interest in various organizations in your area. Service Clubs, Automobile Clubs and Women's Organizations can assist greatly in fostering public support. Many of these groups have helped to underwrite some of the cost of Driver Instruction in the local community.

The local newspaper, radio and television will also help to arouse interest in providing space or time in their media for publicity purposes.

The local police or R.C.M.P. should be approached for they can be very helpful in conducting the course and they too can help to make the community aware of the efforts that are being put forward in the secondary school.

Two other groups who have been most valuable and should be informed of your plans are the Insurance Agents Association and the Automobile Agents Association.

STUDENT INTEREST

Experience has shown that the students are very enthusiastic about learning to drive and one announcement at school assembly will result in more than enough applicants to fill a class.

A letter to parents (see Example No. 1) will acquaint them with the course and ensure their support.

ARRANGING THE DETAILS

1. Approach the local car dealers to see if they will supply a vehicle for use in this course. All the large car manufacturers allow a dealer a rebate on the purchase price of the car to cover depreciation of the car loaned by the dealer to the school for Driver Instruction purposes. The manufacturers have contract forms which may be secured through the local dealer for use between the school and the dealer. If the dealer is not aware of the aid available, have him communicate with the Public Relations Department of the company and request a booklet outlining the assistance. Once one dealer has agreed to co-operate with the school, then the following details can be arranged.
2. Have the dealer set a definite delivery date in the contract which is signed. This should also be arranged if a car is being purchased.

3. Arrange Insurance

The instructional car must be insured for at least the minimum amounts required by the Insurance Act.

4. Storage

This is an important item and it must be looked after before the car is received. A number of suggestions are made to help the organizer in his search for accommodation.

- (a) Storage at the school is the best arrangement if space is available, usually a machine shop, automotives shop or other industrial shop will have an appropriate entrance that will allow the car to be stored there. Clear with principal and the teacher concerned.
- (b) The dealer, if he is providing the car, may insist that the car be returned to his garage each day. This solves a number of problems but can create others. If this arrangement is made, be sure to insist that the car, equipped with the necessary sign, will not be used by the garage staff, for running errands or other purposes.

This must be accepted by all concerned for good public relations. This automobile is to be used exclusively for DRIVER INSTRUCTION.

- (c) A service station may allow the car to be stored on its premises. If such a station is near the school, this may be a good arrangement if no storage can be found at the school.
- (d) Another alternative is to have the instructor take the car home with him and store it in his garage. The requirement that the vehicle be used for no other purposes than driver instruction applies to the instructor and school as it does to the supplier. Most contracts that are signed require the vehicle to be stored indoors. Make this point clear to all when arranging storage space.
- (e) Rent necessary space near the school. This will add to the cost, but often it may be necessary. Make sure that the storage provides a place that can be securely locked. The instructors should be the only persons with keys for this storage garage.

SERVICING ARRANGEMENTS

In most agreements the school agrees to return the car to the dealer in the same condition as it was received, normal wear excepted. The car will need regular servicing and this should be arranged at the dealer's gagage. A record of the date of service plus the costs should be kept by the instructor for future reference.

It would be well to arrange a company from which to purchase gasoline. A special account should be opened which allows authorized persons (the instructors) to obtain gasoline and oil on this account and this account must be used for the driver instruction vehicle only.

Repairs are usually covered by new car warranty and of course these should be supplied by the automobile supplier.

SECURING EQUIPMENT

The Department of Transport in most provinces will supply the following:

- (a) One set of dual controls.
- (b) One classroom set of Sportsmanlike Driving textbooks, Canadian edition.
- (c) One teacher's manual per instructor.
- (d) A classroom set of examination questions and answer sheets to use along with Sportsmanlike Driving.
- (e) Printed record forms.

If dual controls are not available from the Department of Transport, they may be purchased from the American Automobile Association or any of the safety leagues. It will be necessary to state the make of car for which the equipment is to be used. Text books and manuals are published by the McGraw-Hill Company.

ARRANGING STUDENT PARTICIPATION

1. Announcement

The easiest manner to announce the program is to call a general meeting of all interested students, 16 years of age and older. At this meeting the whole idea of Driver Education can be given to the assembled students, and it is wise to answer any and all questions from the students at this time. At the conclusion of this meeting application forms can be given out. A sample will be found in Example No. 2 at the end of this section. Set a deadline for returning the forms to you.

2. Order of Priority

In many schools offering Driver Instruction the number of students desiring the training will exceed the time available. It is suggested that a priority be set up:

- 1. Those students likely to gain employment at the end of the term.
- 2. Age-grade relationship or first come - first accepted.

3. The First Class

1. Distribute the classroom schedule (See Example No. 3)
2. Distribute the "Information Sheet". The Information Sheet is simply a letter outlining the "do's" and "don'ts" for a student. (See Example No. 4)
3. Introduce the psychophysical equipment. Explain what each device is and the purpose for which it is designed to test. The testing program may start in this first session or the second session may deal with testing the student on this equipment.

RECORDS

1. Class Attendance Record

This course should be treated as a regular extracurricular course and a close check should be kept on attendance. Some courses demand a percentage attendance before the student is eligible for a certificate.

2. Individual Record Card. (See Example No. 5)

This card should form the basis of permanent records of the course. Fill out the front side early in the program so that all pertinent data can be added as acquired.

3. Individual Driving Record. (See Example No. 6)

This form is kept from the time the student starts to actually drive the automobile. Keep a supply of these on hand and do not fail to keep the information up to date.

4. Daily Report of the Car. (See Example No. 7)

This is a brief summary of the actual mileage of each student. A student secretary may fill out this form for the instructor. This is the information that is also kept on the "Individual Driving Record" and acts as a complete time check.

5. Time Sheet for Instructors. (See Example No. 8)

The method of paying will vary from school to school. However it is essential that a close, careful check be kept by the instructors on all hours spent in Driver Education. The Attached form may be of some help in developing a form for local use.

6. Text Book Record Card. (See Example No. 9)

These cards record the names of the students to whom the text books have been loaned. A similar method used by the school may be substituted for this means.

7. Car Expense Sheet

It would be well for the instructor to keep a record of the actual costs of all items in this course. A simple lined sheet could record such items as gas, oil, repairs and other items; even salary for the instructor could be recorded here so that the cost per pupil could be computed.

EXAMPLE NO. 1

(Letter to Parents)
(or Hostel Superintendent)

Dear

Date

The School is starting a course in driver instruction and your son or daughter, or hostel resident, if 16 years of age, is eligible to take the course.

The course consists of 25 hours of classroom instruction; at least six hours practice driving in a car equipped with dual controls, and 18 hours in the car as an observer. The car is adequately covered by insurance during the instruction period.

The aim of the driver instruction course is to develop the knowledge, attitudes, habits and skills necessary for safe operation of a motor vehicle. Students who successfully complete the course will have a background knowledge necessary for expert driving. However, they will need additional driving experience under parental guidance and direction.

Regular attendance is essential for both the classroom instruction and the in-car training. Failure to attend regularly may result in a student being dropped from the course.

If you wish you son or daughter to take the driver instruction course, please complete the attached form and return to me.

Yours sincerely,

Driver Instructor

EXAMPLE NO. 2

Application for Driver Instruction Course

..... School

Name

Date

Address

Telephone No.

I hereby give approval for (Name of trainee) to take the Driver Instruction Course. I understand that the instructors of this course have had special preparation for this work and hold a license as required by law.

Signature

Parent

EXAMPLE NO. 3

Scheduling the Programme

In starting driver instruction in the schools, one of the many problems that face the instructor is the question of scheduling. Any one of the following suggestions may help, or could be adapted to local needs.

The Northwest Territories programme requires a minimum of 25 hours in the classroom. To accomplish this any of these schedules may be followed:

1. 25 periods of one hour.
2. 38 periods of 40 minutes (This is recommended)
3. 50 periods of 30 minutes (A possible solution)

If the recommended idea is accepted the schedule could be as follows:

Three periods per week of 40 minutes.	
The course could start the class work in the week of September 12.	
Three weeks in September	- 9 periods
Five weeks in October	- 15 periods
Four weeks in November	- 12 periods
One week in December	- 2 periods
Total	- 38 periods

If this schedule is followed the course will finish on approximately December 10th. There may be some days lost over examination dates but this schedule allows time for this and it should still be possible to finish the complete course by January 10th.

If such a time-table is followed, then it is quite easy to work two classroom sessions per year, one in the first term and the second following January 10th.

Classroom Schedule

The following information may serve as a guide to prepare the classroom schedule. The classroom work will depend on the final programme organization.

Plan Number One

If it is planned to give all the classroom work before starting in the automobile, then it is suggested that the course be organized as shown in Sportsmanlike Driving, Canadian Edition, i.e. complete part one and then do the psychophysical testing. This will then be followed by Part II of the test.

Plan Number Two

This seems to be a more desirable method.

1. Psychophysical testing.
2. Part II of Sportsmanlike Driving - Canadian Edition. This section can be introduced to the students in class, but they are held responsible for covering it before, or during the time they are covering the car work.
3. Classroom work - Part I Sportsmanlike Driving. Here the individual skill of the teacher will improve the classes with materials such as films, speakers, projects, etc.

EXAMPLE NO. 4

Date _ _ _ _ _

Dear _ _ _ _ _

We are pleased to accept your application in Driver Instruction. We hope that this course will be beneficial to you and that you will learn the skills and knowledge necessary to make you an expert driver.

The classroom sessions will be held on _____ in room No. ____ at _____. Promptness is encouraged so that you will obtain the materials presented. I must remind you that if your attendance falls below the required standards you will be asked to leave this course.

In the near future you will receive notice of your car driving group from Mr. _____. Please notify him immediately if you are unable to attend the car sessions when requested.

It might be well to mention that this is a school activity and you are expected to act in a manner that will promote the best interests in our schools. Any boisterous or rowdy conduct in this course will mean your immediate dismissal. You will soon be driving a new model car donated by _____. This vehicle is valued at over \$ _____ and we, you and the instructors, are responsible for returning it in the same condition that it was received. Please carry out instructions as they are given and do not hesitate to ask questions if the directions are not understood.

We hope that the course will assist you and that you will enjoy this program.

Yours sincerely,

Driving Instructor

EXAMPLE NO. 5

RECORD CARD

SURNAME File No.

Given Name(s) Sex: Age

Home Address Beginning Driver

Date of Birth

Limitations or disabilities

.....

Driver Examiner Lic. No.Year ...

Date of Road Test

Classroom Teacher

Car Instructor

Has student ever been in Automobile Accident?

TRAINING RECORD (on Reverse Side)

Glasses Worn	Yes --	No --	Rating
Field of Vision			A, B, C, D, E.
Color Vision			A, B, C, D, E.
Distance Judgement			A, B, C, D, E.
Visual Acuity: Left 20/--			A, B, C, D, E.
Right 20/--			A, B, C, D, E.
Both 20/--			A, B, C, D, E.
Reaction Time			A, B, C, D, E.
Steadiness			A, B, C, D, E.
Glare Vision			A, B, C, D, E.
Night Vision			A, B, C, D, E.
Glare Recovery			A, B, C, D, E.

OVERALL RATING

Course CommencedCompleted

In Classroom

Instruction Time In Car

(Hours) Observation

CLASS ROOM RECORD

Chapter	2	test	--	12	--
	3	"	--	13	--
	4	"	--	14	--
	5	"	--	15	--
	6	"	--	16	--
	7	"	--	17	--
	8	"	--	18	--
				19	--
	9	"	--	20	--
	10	"	--	21	--
	11	"	--	22	--
FINAL	A				
"	B				

DRIVING RECORD

1. Attitude E VG G F P

2. In Car Rating
Remarks E VG G F P3. Road Test Mark
Written Test Mark ...

Trained Driver

Wallet Card No.

EXAMPLE NO. 6

Individual Driving Record

Period Number	Date	Unit Covered	Distance Travelled	Total Distance to Date	Minutes Behind Wheel	Total Time to Date
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						

EXAMPLE NO. 7

Daily Report for the Car

Instructor
 Date Car Licence No.

Name of Student	Odometer Reading		Actual Number of Miles	Time Behind Wheel	Observation	
	Start	Finish			Time	Comments

EXAMPLE NO. 8

 Instructor's Time Sheet
 For Week Ending

Date	Name of Instructor	Class Time	Car Time	Total Time to Date	
				Class	Car

EXAMPLE NO. 9

SPORTSMANLIKE DRIVING

COPY NO.

On receiving this book, the student will sign this card in the proper column. When the book is returned the teacher can then sign in the other column to show book has been returned.

Student's Signature	Date	Teacher's Signature
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

EXAMPLE NO. 10

LETTER TO PARENTS OR HOSTEL SUPERINTENDENT

Completion of Course

.....
(date)

Dear:

This is to notify you that has satisfactorily passed the Driver Instruction course at.....School. Congratulations are extended for this achievement.

.....has received.....hours of classroom instruction andhours of actual practice driving.

He has been taught the fundamental knowledge, habits, attitudes and skills to become an "experienced" or "skilled" driver. He needs additional practice driving under your guidance in:

Backing ☐ Turns ☐ Stopping and Starting ☐
Starting on hills ☐ Driving experience ☐ Parking ☐

We are confident that driving record in the years ahead will be a credit to himself, his school, his community and his country. We will be watching his progress with deep interest.

Yours sincerely,

Driving Instructor

NORTHWEST TERRITORIES
DRIVER INSTRUCTION PROGRAM

PART III

THE INSTRUCTOR

The success of Driver Education with any age group depends greatly on the personality and ability of the instructor. The instructor becomes a safety educator and as such is required to have definite principles. This part of the manual has been prepared to outline the standards and qualifications which a Driver Instructor should possess.

The following will be found as a suggested list of qualifications that should be followed in selecting the personnel for offering this program.

General Qualifications

1. Good health and emotional stability.
2. Honesty and integrity.
3. Respect for personality of others.
4. Skill in motivating students to learn.
5. Knowledge and understanding of human growth and development.
6. Enthusiasm.
7. Interest in total educational program.

Special Qualifications

1. Enthusiasm for possible accomplishment in safety education, including the actual reduction of accidents.
2. Even temperament, sympathetic attitude and a high degree of patience needed for practice driving instruction.
3. Interest in and enthusiasm for the teaching of driver instruction.
4. Sufficient maturity to command respect of students.
5. Above-average driving ability adequately demonstrated and further evidenced by possession of:
 - (a) a valid driver's licence.

- (b) a driving record without accidents for which he was responsible and without repeated traffic law violations as shown by official driver records.
 - (c) a broad background of experience in driving in cities and on highways under various traffic, weather and road conditions.
 - (d) a desire to set a good example in his own driving.
6. An enquiring outlook.
 7. Ability to organize and present instruction materials with ingenuity and imagination.
 8. Ability to analyse and classify the problems of student drivers.

Policies

1. A driving instructor must be in possession of a certificate confirming attendance and qualification at a recognized course for driving instructors.
2. The instructor must be in possession of a Driver Instructor's Permit issued by the Northwest Territories.
3. Suspension as a driver instructor is automatic on becoming charged by careless driving or any other such charge.
4. Punctuality must be a keyword and schedules should be maintained with courses commencing and finishing on time.
5. The instructor will be expected to operate his own personal vehicle in the same manner as he instructs his trainees. His actions in driving should always be exemplary.
6. Records are required to be maintained by the instructor in a neat and efficient manner, accurate and up to date.
7. A general word on politeness, courtesy and dress should only have to be mentioned to remind the instructor of his professional position.

Essentials for Effective Classroom Instruction

To try to outline teaching methods in a brochure of this nature is impossible. This is a teaching situation and a teacher will know

best how to teach this, his chosen subject. However, it might be well to list a few points.

1. Preparation is essential.
2. Know the main objectives that are to be covered.
3. Keep lessons to a few chosen points.
4. Examples are good, but not too many personal experiences, as this will become tiresome and boring.
5. A good supply of Audio-visual aids are available and can generally be used to good advantage. Again preparation is needed. (See Section 7 of this manual for Audio-Visual material).

Essentials for Effective Behind-The-Wheel Instruction

1. The instructor must show no favouritism.
2. Each student is entitled to equal driving time.
3. Students are in the care of the instructor while driving instruction is being given, therefore every precaution must be taken for their safety.
4. Students must not be allowed to operate the dual controls while the instructor is behind the wheel in full control of the vehicle.
5. When demonstrating or pointing out working parts of the engine or car, full safety precautions must be taken.
6. Other students in the car must not be permitted to distract the attention of the student who is behind the wheel.
7. The same terminology should be used throughout to avoid confusion, i.e., gas pedal...accelerator. Use one or the other always.
8. Never be satisfied until each step is mastered by the student.
9. Respect the answers that are sincerely given, even if wrong.
10. A sense of humour, discretely used, is appreciated.
11. Discipline must be maintained.

THE NORTHWEST TERRITORIES
DRIVER INSTRUCTION PROGRAM

PART IV

NORTHWEST TERRITORIES TRAFFIC LAWS

To aid the teacher an outline of the laws concerning the use of a vehicle on the highway is included in this section. The legal material is taken from the Motor Vehicles Ordinance of the Northwest Territories and the Criminal Code of Canada. It is designed to assist the teacher in his instruction on the law. However, it has been compiled for convenience only. For accurate reference, recourse should be made to Motor Vehicle Ordinance of the Northwest Territories.

Types of Licences See Part III Sec. 44-61 Motor Vehicle Ordinance

1. Operator's Licence
2. Chauffeur's Licence

When the driver's road test is taken on a motorcycle, the operator's or chauffeur's class of licence is restricted to the operation of a motorcycle.

Persons Prohibited from Holding a Licence

1. The police magistrate or justice of the peace may revoke the operator's licence whereupon the licence must be mailed or delivered to the Commissioner.
2. A licence shall not be issued under this section to a person who is under the age of sixteen.

Operator's Licence - issued to persons:

1. Sixteen years of age or over.
2. Who have passed a driving test for an operator's licence.

Chauffeur's Licence - issued to persons:

1. Eighteen years of age or over.
2. Who have passed a driving test for a chauffeur's licence.

Restrictions

Restrictions may be placed upon an operator of a vehicle to compensate for any physical handicap which he might have. These restrictions may include:

1. As a visual aid, the use of prescribed glasses while driving.
2. As mechanical aid, operation of vehicles equipped with special equipment or safety devices. The equipment or safety devices required should be stated by the examiner on the licence.

Carrying and Displaying Licence.

The driver's licence must be carried by the operator when operating a vehicle.

It is unlawful for a person:

1. To operate a motor vehicle on a highway without a driver's licence.
2. To permit an unlicensed person to operate a motor vehicle on a highway.
3. To have a licence that has been cancelled, suspended, fictitiously or fraudulently obtained or altered.
4. To lend a driver's licence.
5. To permit the use of a licence by anyone other than the person to whom the licence is issued.
6. To show or present as his own, a licence not issued to him.
7. To fail or refuse to surrender a licence that has been suspended or cancelled, when demanded by the Constable or Commissioner.
8. To apply for, secure or retain more than one driver's licence. (If the original is lost or stolen, application may be made for a duplicate. If the original is found or recovered, it must be returned immediately to the Commissioner or the person appointed by the Commissioner).
9. To apply for a licence while under suspension.
10. To drive or operate a motor vehicle on a highway while under sixteen years of age.
11. To employ or permit anyone under the age of sixteen years of age to drive or operate a motor vehicle on a highway.

Pavement Markings on Two Lane Highway

These are provided for your guidance and protection. The line in the centre, broken or solid, divides opposing lanes of traffic. A solid line in your lane means there is not sufficient distance to permit safe passing. A broken line permits passing if the way ahead and behind is clear.

Passing

1. Never overtake and pass another vehicle unless you know you can do so without danger to yourself and/or to others, who are approaching or overtaking; if in doubt, do not pass.
2. Signal your intentions clearly in advance of passing and see that the way is clear before turning into the passing lane.
3. Pass another vehicle only when the way is clear ahead and to the rear. Make allowance for the "blind" areas in the back corners of your vehicle in case another vehicle is hidden from view. Pull out only after signalling and get well ahead, signal that you are about to return and move into the right-hand lane.
4. Passing on the right is permitted under the following conditions only:
 - (a) When overtaking another vehicle making a left turn or signalling intent to make a left turn, and
 - (b) On one way streets
 - (c) On streets with two or more lanes in each direction. You must not drive on the shoulder when passing.
5. Do not pass where vision is obstructed. It is an offence to drive to the left of the centre of a highway on a hill, curve or within 100 feet of a bridge, viaduct or tunnel. It is an offence to drive to the left of the centre of the highway within 100 feet of, or when crossing an intersection or level railway crossing, unless making a left hand turn at an intersection. The rules prohibiting driving to the left of the centre of the highway do not apply to one-way streets or to highways divided into clearly marked lanes where there are more such lanes for traffic in one direction than in the other direction.
6. When overtaken by another vehicle, travelling at a greater speed, pull over to the right of the roadway and allow the other vehicle to pass. Do not increase your speed while the other vehicle is in the act of passing.

7. Do not overtake and pass a SCHOOL BUS which is stopped on a highway when the red lights on the rear of the bus are flashing. Pass only when the bus starts or when the red lights are no longer flashing. On a highway (other than a highway with separate roadways) when meeting a school bus which is stopped with red signal lights flashing on the front, you must stop before reaching the bus and not proceed until the bus starts or the red lights are no longer flashing. The flashing lights indicate that children are about to get on or off the bus and extreme care should be exercised.

Turning

The law requires that you give a signal to show your intention to turn, stop or change direction if the movement of any other vehicle may be affected by your move. Signal well in advance so other drivers will see and understand what you plan to do.

When turning to the right or left at an intersection or into a driveway, make your turn carefully. Make proper allowances for vehicles ahead and behind. Give pedestrians the right of way.

To turn right into an intersecting two-way highway, approach the intersection and turn as closely as practicable to the right curb or edge of the roadway.

To turn left into an intersecting two-way highway, approach the intersection as closely as possible to the centre line, keep to the right of the centre line until into the intersection. Yield right of way to traffic approaching from the opposite direction. When way is clear, complete your turn immediately to the right of the centre line of the highway entered.

To turn left from a one-way into a two-way highway, approach the intersection as closely as practicable to the left curb on edge of the roadway. Complete your turn to the right of the centre line of the highway entered.

To turn left from a two-way highway into a one-way highway, approach the intersection as closely as possible to the centre line. Complete your turn as closely as practicable to the left curb or edge of the one-way highway entered.

To turn left from a one-way highway into a one-way highway, approach the intersection as closely as practicable to the left edge of the roadway. On entering the intersection, make your turn yielding the right of way to any on-coming traffic unless such traffic is controlled.

Signals

The law requires you to signal when you intend to change direction or stop. You may use a mechanical device, hand signals or both. Give signals well in advance so that other drivers will see and understand what you plan to do.

When signalling by hand and arm:

1. Indicate left turn by extending the hand and arm horizontally beyond the left side of the vehicle.
2. Indicate right turn by extending the hand and arm upward beyond the left side of the vehicle.
3. Indicate stop or sudden reduction in speed by extending the hand and arm downward beyond the left side of the vehicle.

Right of Way

The law requires that in certain circumstances one driver shall yield the right of way to another. When conditions seem to indicate that another driver should yield the right of way to you, do not insist on your rights at the risk of an accident. Between safety and the right of way choose safety. When two vehicles enter an open intersection from different highways at approximately the same time, the vehicle on the left shall yield the right of way to the vehicle on the right. When intending to turn left in an intersection, yield the right of way to traffic in the intersection or close enough to be a hazard. After yielding to this traffic, proceed with caution into or across the intersection. When in doubt give way. When you are on a through highway approaching an intersection, you are required to yield to vehicles that are in or crossing the intersection.

A "Yield" sign at an intersection means:

1. Slow down to a reasonable speed for existing conditions.
2. Stop if necessary and yield the right of way to traffic in the intersection or close enough to be a hazard.
3. Having yielded, proceed with caution. If about to enter a highway from a driveway or private road, yield right of way to all vehicles approaching on the highway.

Speed Limits

1. The speed limit in cities, towns, villages, police villages and built-up areas is 30 miles per hour, unless otherwise posted.
2. The speed limit on rural highways is 50 miles per hour, unless otherwise posted.
3. The maximum speed permitted over a level railway crossing is 20 miles per hour.
4. Slow driving - to induce all drivers to drive within reasonable ranges of speed, the law provides a penalty for the operation of a motor vehicle at such a slow rate of speed as to block the normal and reasonable movement of traffic on the highways.

Built-Up Area - means the territory continuous to a highway not within a city, town, village or police village where,

1. not less than 50 per cent of the frontage upon one of the highways for a distance of not less than 600 feet is occupied by dwellings, buildings used for business purposes, schools or churches, or
2. not less than 50 per cent of the frontage upon both sides of the highway for a distance of not less than 300 feet is occupied by dwellings, buildings used for business purposes, schools or churches, or
3. not more than 600 feet of the highway separates any territory described in sub-paragraph 1 or 2 from any other territory described in sub-paragraph 1 or 2, and signs are displayed as required by the regulations.

Pedestrians

Pedestrians crossing with the light have the right of way.

It is a courteous and safe practice to yield the right of way to pedestrians at all times and under all conditions. Allow pedestrians time to clear the intersection before moving ahead on the "go" signal.

Watch for the pedestrian with the white cane. The white cane is the symbol of the blind. Its carrier depends on you for safety.

Watch out for the X-sign denoting a pedestrian crossover. Yield the right of way to pedestrians in the crossover. Stop if necessary. Do not overtake or pass a vehicle stopped for this purpose. (Pedestrian crossovers may be encountered at or between intersections).

Safe Driving Practices for the Protection of Those on Foot

1. Drive at a reduced speed when passing standing vehicles.
2. Be alert for traffic errors of pedestrians.
3. Watch out when in the neighbourhood of children and aged persons.
4. Observe signs denoting school zones and crossovers.
5. Don't block crosswalks or crossovers.
6. Reduce speed and be particularly alert when darkness or weather conditions obscure your vision.
7. When at home, park your car in the garage or in the driveway. A parked car on a residential street is a definite and unnecessary hazard.

Use of Headlight Passing Beam

When headlights are required, the driver of a vehicle equipped with multi-beam headlamps must use the lower or passing beam under the following conditions:

1. When approaching within 500 feet of an oncoming vehicle.
2. When following within 200 feet of another vehicle, except when in the act of overtaking and passing.

Parking

Parking is defined as allowing your vehicle, whether occupied or not, to stand longer than necessary to take on or discharge passengers or to load or to unload merchandise.

Park on the right hand side of the highway having reference to the direction the vehicle is facing. This does not apply on streets designated for one-way traffic.

Unless signs authorize angle parking, park parallel to the edge of the highway.

Unless signs permit, do not park on the roadway (travelled part of the highway). Move off the roadway onto the shoulder before coming to a stop. Except where signs permit, do not park on a curve, hill, or any

place on a highway unless there is a clear view for at least 400 feet in each direction.

The above provision will not apply when a vehicle becomes so disabled that it is impossible to avoid a temporary violation.

If a vehicle is standing or parked on the highway at times when the lights are required, the vehicle should show one light on the left side except within a city, town or village. The light must be clearly visible for a distance of at least 200 feet in each direction, white to the front and red to the rear.

It is Unlawful to Park

1. On a sidewalk, crosswalk, bridge or on a street in a manner that obstructs traffic.
2. In front of an entrance way (public or private) to or from a street or highway.
3. In front of the entrance to a hotel, theatre, auditorium, office building, hospital or loading or unloading location.
4. Blocking the convenient removal of any vehicle already parked.
5. Within 10 feet of a fire hydrant.
6. Within 30 feet of a crosswalk at an intersection or crossover.
7. On rural highways within 50 feet of a signalized intersection or level crossing within 300 feet of a bridge.
8. On rural highways in front of school property on either side of the highway; on urban streets, on the same side of the street as the school grounds.
9. On urban streets between a safety zone and the adjacent curb.
10. In any area where an approved sign prohibits parking.

When parking on a hill, turn your front wheels against the curb and set your parking brake. When parking on an uphill grade where there is no curb, reverse this procedure. Double parking is generally unlawful.

All motor vehicles must be equipped with the following:

Headlights

At least two headlights must be located on the front of an automobile. These are to be lighted when driving, at least one-half hour after sunset and one-half hour before sunrise or when insufficient light or unfavourable atmospheric conditions, in which persons and vehicles are not clearly discernible at a distance of 500 feet or less. They must be visible for 500 feet and render clearly discernible vehicles or pedestrians for a distance of at least 350 feet ahead of the vehicle.

Driving with one headlight or improperly focussed lights is unlawful.

Motorcycles must have at least one front lamp (white only).

No motor vehicle shall carry on the front more than four lighted lights of more than 300 candlepower.

Tail Lights

All motor vehicles (including motorcycles) and trailers must show at the rear:

1. a red light
2. a white light directed to show the number plate

Flashing Blue Light

A motor vehicle or road building machine while being used for the removal of snow from a highway must be equipped with a flashing blue lamp visible for a distance of 500 feet. The use of this lamp is prohibited at all other times and on other vehicles.

Flashing Red Light

A flashing red light is used on fire department vehicles, ambulances and police cruisers. School buses are equipped with two flashing red lights on the rear.

Flashing Amber Light

Trucks used in towing other vehicles use an amber or yellow light.

Brakes

Every motor vehicle other than a motorcycle must have two braking systems with separate means of application. One system shall be adequate to stop the motor vehicle and the other adequate to hold it stationary.

Every motorcycle must be equipped with at least one brake.

Whenever the combined weight of vehicle and load exceed 3,000 pounds, a trailer (including boat and box trailer) or semi-trailer must be equipped with brakes adequate to stop and hold it stationary.

Brakes must be kept in good working order. They may be inspected at anytime by a police officer.

Windshield Wipers

All cars and trucks must be equipped with windshield wipers.

Rear-View Mirrors

All cars and trucks must have a mirror securely attached in a manner that gives a clear view of the road and vehicles to the rear.

Outside Mirrors

The use of outside mirrors give added view of the traffic behind. These can be a definite asset under present day driving conditions. They are optional equipment.

Mudguards

Motor vehicles and trailers must have mudguards or fenders to effectively reduce wheel spray or splash of water from the roadway to the rear, unless the body provides adequate protection.

Muffler

Every motor vehicle (including sports cars and motorcycles) must be equipped with an exhaust muffler. It must be in good working order to prevent excessive or unusual noise.

A muffler cut-out, by-pass or similar device is unlawful.

Horn

A horn is required to provide an adequate warning; it must not be used in an unreasonable manner.

Any horn making a sound resembling that produced by a siren is illegal.

Registration Plates

All motor vehicles and trailers must be registered with the Commissioner, or person authorized by him, to keep a Register before being operated on a highway and,

1. the proper number (registration) plates must be on the front and rear of the motor vehicle
2. trailers must have one number plate on the rear. All number plates must be kept clean and clearly visible.

Television Sets Prohibited

No person shall operate or drive upon a highway a motor vehicle that is equipped with a television receiving set in the front seat or is visible to the driver.

What to do in Case of an Accident

If involved, STOP. Every driver, directly or indirectly involved in an accident, must stop. If damage is not extensive, move the vehicles to allow traffic to pass. Give all possible assistance. Call a doctor or an ambulance if necessary.

Give your name, address, permit number of your vehicle to the other driver, police or anyone who requests such information.

Report the accident to your insurance company representative.

Unoccupied Vehicles

If you collide with a parked vehicle and you cannot find the owner, leave your name and address so he can contact you. Even in the event of minor damage it is wise to report an accident to the police and your insurance company representative. If you are directly or indirectly involved in an accident resulting in any personal injury whatsoever or in property damage exceeding \$100.00 you must report the accident to the police. If you are not capable of making a report and there is another occupant of your car the occupant must do so.

Leaving the Scene of an Accident

Leaving the scene of an accident may be punishable on conviction by a fine or imprisonment, or to both such fine and imprisonment. The magistrat may also prohibit you from driving anywhere in Canada for a period up to three years.

Suspension by the Courts

1. A Magistrate has the authority under section 225 (1) of the Criminal Code of Canada to prohibit driving for any period up to three years upon a conviction for:

Manslaughter - if offence involves the use of a motor vehicle.

Criminal Negligence - if offence involves the use of a motor vehicle.

Drunk Driving.

Driving while Impaired.

Failing to Remain at the Scene of an Accident.

Dangerous Driving.

In some cases, depending on the penalty, a longer period of suspension may be ordered. Any one convicted of an offence who does not have a driver's licence may be disqualified from obtaining a licence for any period the court considers proper.

2. A conviction for Careless Driving may result in the court suspending the driver's licence for any period up to two years.
3. The majority of the penalty sections in the Highway Traffic Act give the courts authority to suspend upon conviction for a second or third or subsequent offence periods of suspension up to six months. For example, speeding - second offence - suspension up to three months; third or subsequent offence - suspension up to six months.

Mandatory Suspension

Driver's Licences

1. First conviction for Drunk Driving, Criminal Negligence or Manslaughter - suspension for six months. If any personal injury or property damage - suspension for one year. Subsequent conviction - suspension for one year; if personal injury or property damage - suspension for two years.
2. First Conviction for Dangerous Driving or Impaired Driving - suspension for six months. Subsequent conviction - suspension for six months; if any personal injury or property damage - suspension one year.

3. First conviction for Failure to Remain at the scene of an accident under the Criminal Code (Canada), property damage only — suspension for three months; if personal injury or death — suspension for six months. Subsequent conviction, if property damage only — suspension for six months; if personal injury or death — suspension for one year.
4. Conviction for Driving under Suspension — suspension for six months in addition to suspension in effect.
5. A subsequent conviction making up a combination of convictions under (1) and (2) above — suspension for one year; if property damage or personal injury — suspension for two years.

For example: A person who is convicted for Drunk Driving and is subsequently convicted for Impaired Driving would receive a suspension period equivalent to a subsequent conviction for Drunk Driving. "Subsequent" relates only to convictions within a five-year period.

6. Suspension of both driver's licence and motor vehicle permits and plates is mandatory in the following instances:

(a) for failure to pay a judgment for the damage arising out of a motor vehicle accident. The driver's licence and motor vehicle permits of judgment debtor are suspended until an arrangement is made to settle the judgment and proof of Financial Responsibility is filed.

(b) upon conviction for the following offences:

1. Criminal Offences — Manslaughter (involving the use of a motor vehicle)
2. Criminal Negligence — (involving the use of a motor vehicle)
3. Drunk Driving
4. Impaired Driving (drugs or alcohol)
5. Failing to remain at the scene of an accident
6. Dangerous Driving
7. Conviction for Driving while Disqualified — six months suspension.
8. First conviction for Failing to Remain at the Scene of an Accident — suspension three months. If personal injury or death, suspension for six months. Second or subsequent conviction periods double.

Discretionary Suspension

The Registrar of Motor Vehicles may suspend any licence or permit, or prohibit any person from driving. He may take this action for any reason he considers sufficient and may suspend for any length of time he considers reasonable.

Under this authority Persons are Suspended Who:

1. Upon re-examination fail to indicate evidence of their ability to operate a motor vehicle in safety.
2. Have an exceptionally bad operating record.
3. Suffer from a physical or mental disability which may prevent them from operating a motor vehicle in safety.

NORTHWEST TERRITORIES
DRIVER INSTRUCTION PROGRAM

PART V

IN THE CLASSROOM: SUGGESTED COURSE OUTLINE

The units of instruction presented here have been prepared as a guide for the planning and teaching of a good minimum course in driver instruction. The order of sequence and the time allotment for each instruction unit will vary according to local conditions and program organization.

Classroom Program

1. Study and discussion of The Ordinance to Regulate the Speed and Operation of Motor Vehicles on Highways.
2. Fundamental Principles of Operation of the Automobile.
3. Laws governing driving: (a) Natural Laws
(b) Man-made Laws
4. Qualities necessary for the driver.
5. Pedestrians' part in prevention of accidents.
6. Ownership of car and responsibilities involved.
7. Highways and their design.
8. Professional driving tactics.

A. Gauges and Indicators

1. Speedometer

This instrument indicates, in miles per hour, how fast the car is travelling.

2. Odometer

The odometer shows how far the car has travelled in miles.

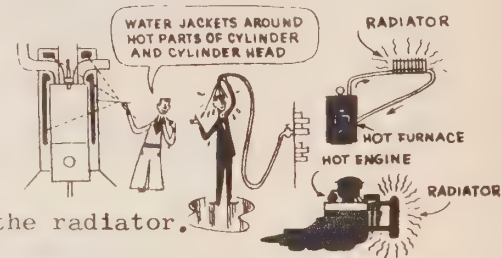
3. Motor Temperature Gauge

The coolant circulating around the cylinders and through the cylinder head absorbs heat from the engine. It is then pumped to the radiator to be cooled. The temperature gauge indicates the temperature of this coolant at its hottest point.

Normal temperature of this coolant is 160° to 180° Fahrenheit.

Basic causes of high temperature may be:

- (a) Insufficient coolant in the radiator.
- (b) Faulty circulation of coolant.
- (c) Insufficient air circulating through the radiator.



4. Fuel Gauge

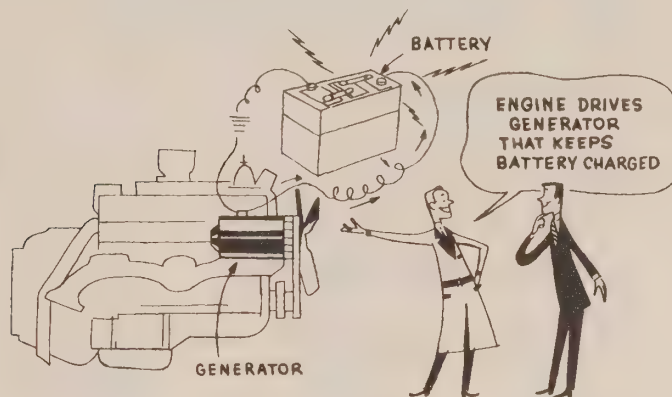
This gauge indicates the amount of gasoline in the tank. Keeping the tank filled avoids the possibility of running out of gas, and lessens the danger of water forming in the fuel through condensation of moisture, which is usually the cause of the gas line freezing in the winter.

5. Oil Pressure Gauge of Indicator

This gauge shows the amount of pressure used to pump the oil to the moving parts of the engine. It does not indicate the amount of oil in the crankcase. Driving with low oil pressure may damage the engine.

6. Ammeter or Generator Indicator

This indicator shows the flow of electricity to and from the battery; it does not show the amount of electricity stored in the battery. When the indicator shows CHARGE it means that the generator is putting more electricity into the battery than is flowing out. A DISCHARGE reading means more electricity is being used from the battery than is being produced by the generator.



B. Safety Devices

1. Sun visors

Sun visors are located above the windshield and can be used to reduce sun glare from the front or sides.

2. Rear view mirrors

These devices show the traffic conditions to the rear. The driver should glance at them frequently, and at all times be aware of their usefulness.

3. Horn ring or button

The horn is controlled by a button or horn ring located on the steering wheel.

4. Light switches

The light switch is mounted on the instrument panel. It regulates the head lights and parking lights. A switch button on the floor controlled by the left foot, changes the headlight beam from high to low. Most cars are equipped with a small red light on the instrument panel which indicates the high beam.

5. Windshield wiper

This safety aid is usually controlled by a knob on the instrument panel. Some wipers are either driven by the compression of the motor or by a small motor drawing electricity from the battery.

6. Windshield washers

This is a means of spraying a small stream of water to the windshield. It is controlled by a knob either located on the instrument panel or a floor switch button.

7. Windshield defroster

The defroster clears the windshield of moisture, frost and ice by blowing warm air from the heater against the windshield.

8. Seat adjustment lever

This lever or button is located at the base of the driver's seat either in front or on the left side. This permits adjustment of the front seat either forward or backward.

9. Turn indicator

This is usually located to the left of the steering column under the steering wheel. A turn is indicated by pulling the lever up to turn right and down for a left hand turn. The indicator should turn off automatically after the turn has been made.

10. Brake lights

These are red lights located at the rear of a vehicle and light up when the brake pedal is pressed.

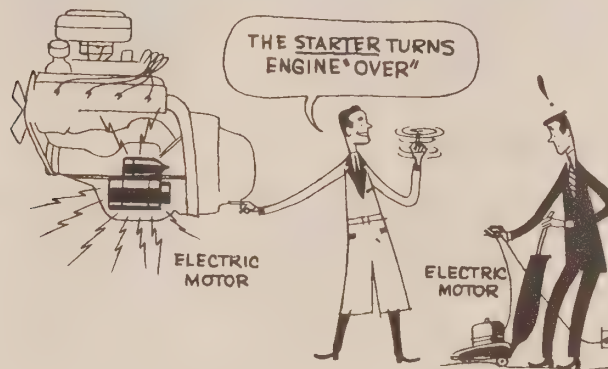
C. Starting Device

1. Ignition switch

This must be turned on by inserting and turning the key before the engine can be started.

2. Starter switch

After the ignition is turned on, the engine is started by the starter switch or button. Most common locations are a button on the instrument panel, combined with the ignition switch or combined with the accelerator or clutch pedal. In starting the engine, the starter switch should be released as soon as the engine is running. Never use this device when the engine is running as this may cause serious damage to the starter gears.



3. Choke

The choke helps in starting a cold engine by cutting down the amount of air going into the carburetor, thus enriching the mixture with gasoline. The choke is operated either by putting a knob on the instrument panel, or working automatically.

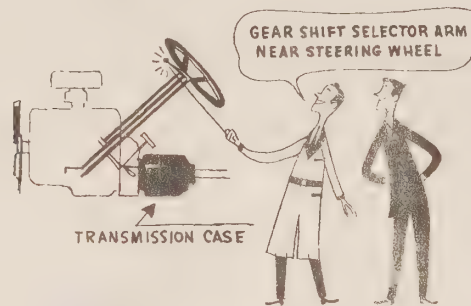
D. Control Devices

1. Steering wheel

This device controls the directional movement of the car. Turning it clockwise steers the car to the right; counterclockwise to the left.

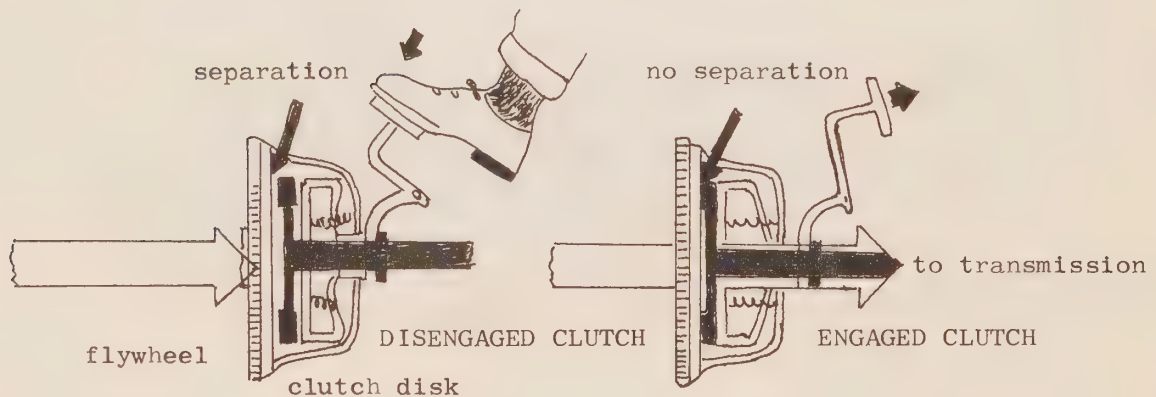
2. Selector lever or Gearshift lever

This lever is usually mounted to the right of the steering column. In European imported cars and various sports cars the gearshift lever is usually mounted on the floor. It changes the gears according to the driver's need for speed and power.



3. Accelerator pedal

This pedal is operated by the right foot and regulates the speed of the engine. When not depressed the engine continues to run at an idle speed.

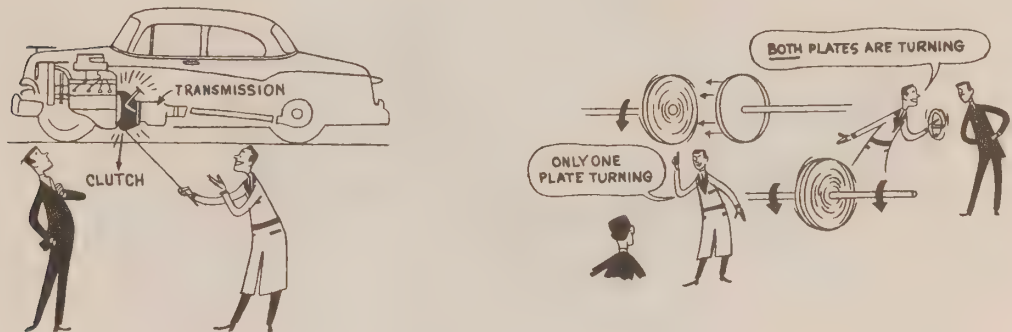


4. Foot brake pedal

Pressure on the foot brake pedal operates the brakes on all four wheels of the car. This pedal should be operated by the right foot.

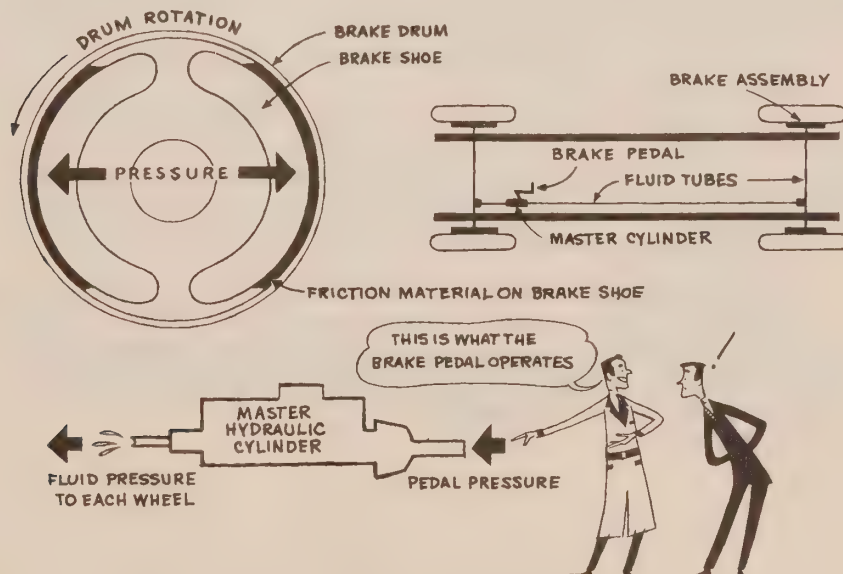
5. Clutch pedal

On gearshift cars this pedal is operated by the left foot. It permits the engine and the car wheels to be connected or disconnected.



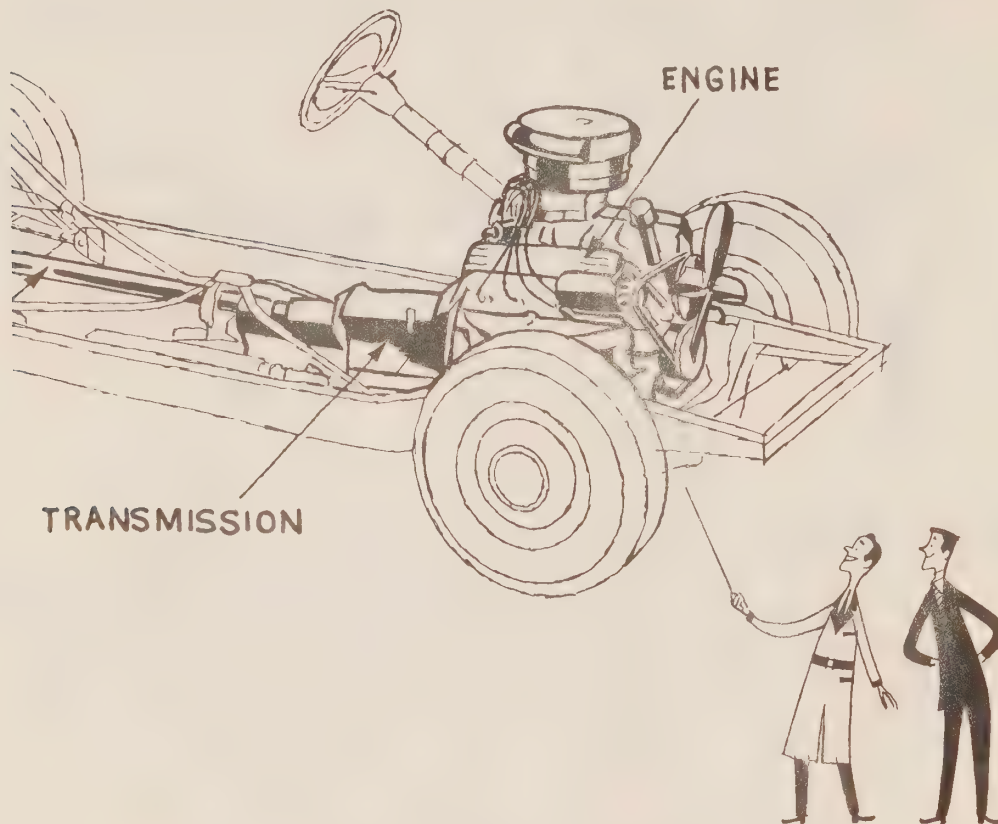
6. Hand brake

This brake is primarily to keep the car stationary when parked. It is usually a lever located to the left or right of the steering column and is applied by being pulled out. On some cars this brake is a pedal. This pedal, to the left of the clutch pedal is set by the pressure applied by the left foot and released by pulling a knob on the instrument panel.



E. Power Plant

Power is developed in an engine when a mixture of gasoline and air is compressed and ignited by a spark. When this mixture is ignited, it burns with explosive force. This force produces power.



1. Carburetor

The carburetor receives air through the air filter and gasoline through the fuel pump. These are mixed in the form of a vapour in the carburetor usually at a ratio of fifteen parts of air to one part of gasoline by weight. The gasoline and air mixture then enters the cylinders.

2. Cylinder

The cylinder is a large hole bored in the engine block. It is closed at the top by a flat metal cover bolted to the block. This is called the cylinder head. Closing the bottom of the cylinder but free to move up and down in it is a movable plug called a piston. Two openings or valves are located at the top of each cylinder. Fuel enters the cylinder through one of these valves and the burned gases pass out through the other. These are called the intake valve and the exhaust valve.

3. Spark

After the gasoline - air mixture enters the cylinder it is compressed and ignited by a hot electric spark. This spark is supplied by a spark plug located at the top of each cylinder. There are two wires at the inner end of each spark plug separated by a gap approximately the thickness of a dime. When the current jumps this gap it causes a spark which ignites the compressed gasoline-air mixture. When the fuel explodes, great force is exerted on the piston head forcing the piston down. The pistons are connected by connecting rods to the crankshaft. When the pistons are pushed down the crankshaft is rotated "thus making the wheels go round".

4. The Four-stroke cycle

Automobile engines operate on the four-stroke power cycle. Two round trips of the piston, up and down twice, constitute one-power cycle.

(a) Intake stroke

The downward stroke of the piston is the intake stroke. The gasoline-air mixture is drawn into the cylinder through the intake valve. When the piston reaches the bottom of the cylinder the intake valve closes.

(b) Compression stroke

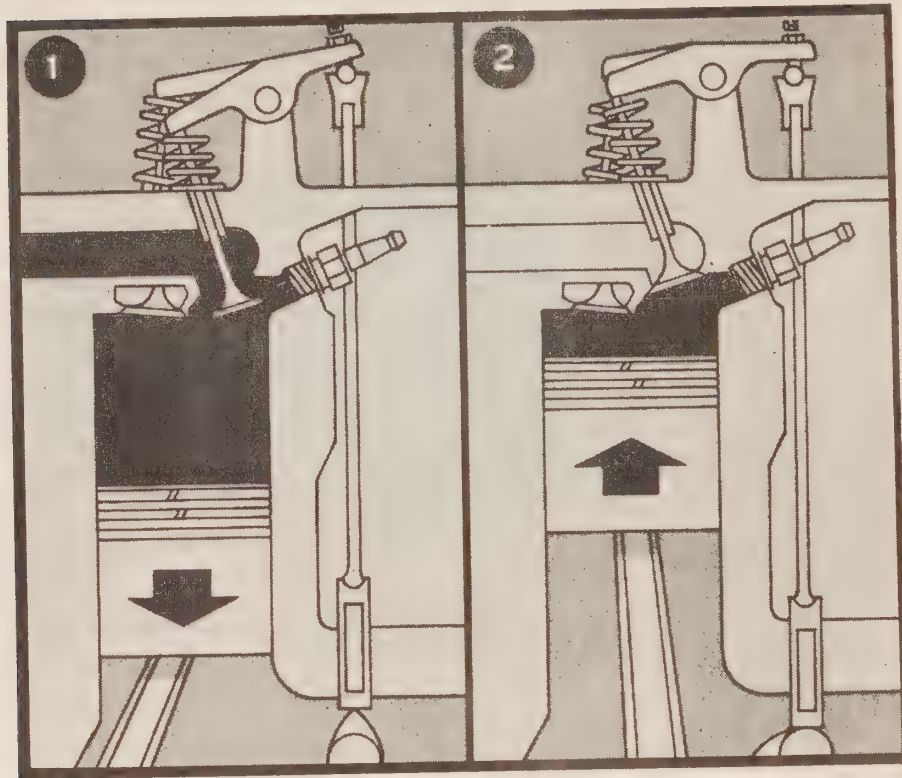
The piston moves upward, squeezing the gasoline-air mixture into a small space. The more it is compressed before exploding, the greater is the power of the explosion.

(c) Power stroke

The spark igniting the gases and pushing the piston downward produces the power stroke. The valves remain closed.

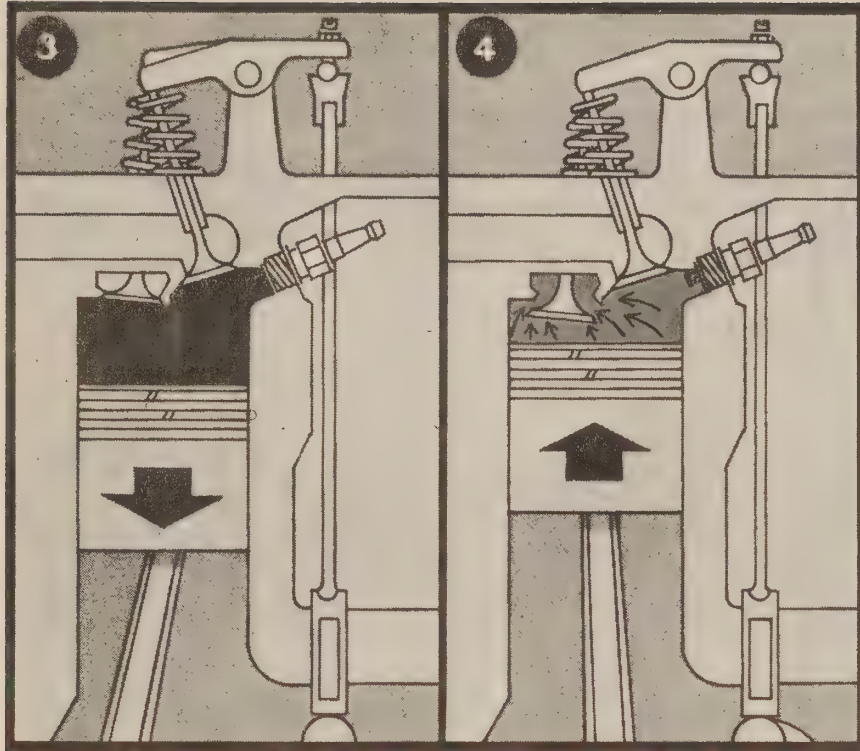
(d) Exhaust stroke

It is necessary to clear the cylinder of burned gases before a fresh supply of gases can be drawn in. To do this the piston moves up in the cylinder, the exhaust valve opens and the burned gases are forced out.



1 A combustible air-fuel mixture from the carburetor is forced into the cylinder.

2 This air-fuel charge is compressed by the upward stroke of the piston. Near the end of the stroke, ignition occurs when a spark leaps between the spark-plug electrodes.



3 The air-fuel mixture explodes, furnishing the energy which pushes down the piston. The piston turns the crankshaft and flywheel, developing the power which ultimately reaches the wheels.

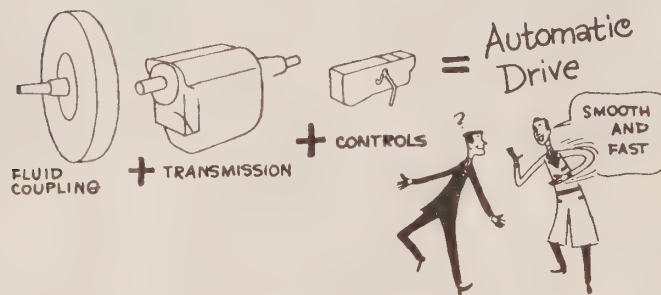
4 On the exhaust stroke, the used or spent combustion gases are forced by the piston out of the cylinder through the open exhaust valve.

F. Transmission of Power

After the power has been produced it is transferred to the rear wheels by the power train.

1. Fluid coupling

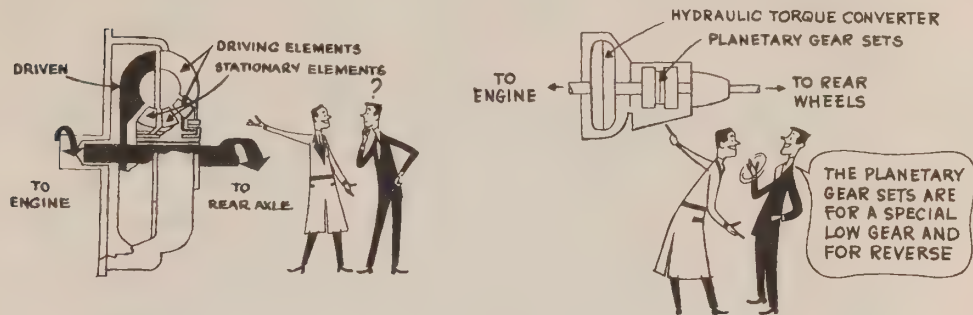
The fluid coupling in an automatic transmission simply transfers engine power to the driveshaft. It is shaped like a doughnut, sliced through the middle, with blades on the inside of each half. This unit is enclosed in a tightly sealed chamber and filled with oil. The half which is connected to the motor (called the "pump") directs oil.



2. Torque converter

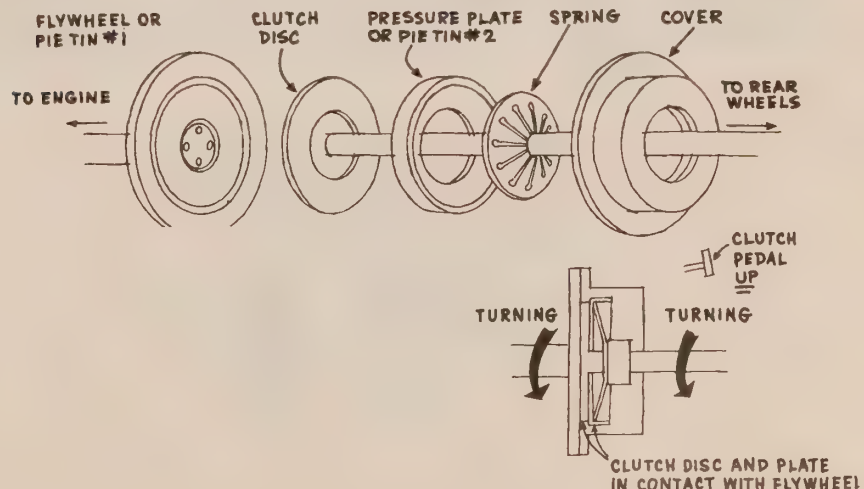
This unit is like the fluid coupling except that it includes a secondary pump and stators. The primary pump throws oil against the stators which kick it back into the secondary pump. This action results in an increase in the force with which the oil then hits the turbine. Therefore, the torque has been increased or "converted". As the car gains speed all the parts begin to turn together, the pump and turbine rotating at the same speed. Most automatic transmissions use either a simple fluid coupling or a torque converter in conjunction with planetary gears to change the power-speed ratio. The proper gear is selected automatically depending on the car speed, pressure on the accelerator pedal and the position of the gear selector lever.

Standard transmission cars use a friction clutch and a train of gears to transfer the power of the engine to the driveshaft.



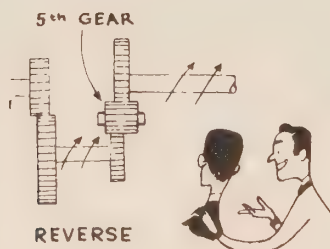
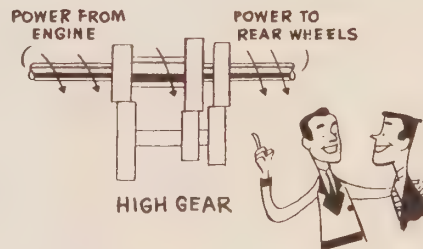
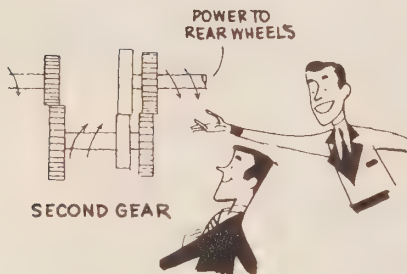
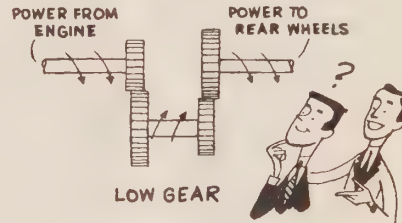
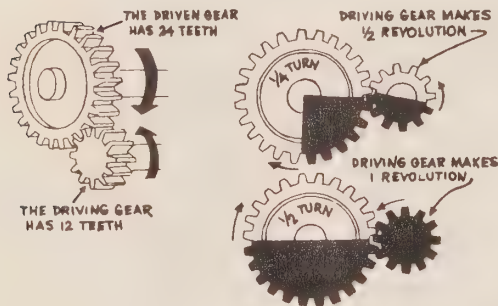
3. Clutch

This mechanism enables the driver to connect or disconnect the engine and the rear wheels in standard transmission vehicles. The clutch and flywheel action can be compared to two phonograph records on a spindle. If a little space is left between the records one can be turned without turning the other. When they are pressed closely together, rotating one will rotate the other. The clutch in a gearshift car has a friction plate fastened to the flywheel of the crankshaft. When these plates are tight together the clutch is engaged, that is, the flywheel is turning the clutch plate. Power is then transmitted through the clutch plate to the transmission. When the clutch pedal is depressed, the two plates are separated and the motion of the flywheel does not affect the clutch plate, hence it is possible to run the engine while the car stands still.



4. Train of gears

Transmission gears are simply metal wheels with deeply grooved edges. When two gears of different diameters are meshed, they rotate at different speeds. The larger one turns more slowly than the smaller. Equal size gears meshed turn at the same speed. If one gear is twice as large as the other, it will make one turn while the smaller one makes two. However, the larger gear in losing speed gains power. Therefore, when a small gear drives a large gear, power is developed. The conventional transmission offers a five-gear arrangement: (1) first or low gear, (2) second or intermediate gear (3) third or high gear (4) reverse gear (5) neutral. First gear provides maximum power for starting or "heavy going", second allows the car to roll along faster and the third is the high speed gear. Reverse gear moves the car backwards. Neutral, disconnects the engine from the driveshaft and no gears are engaged.

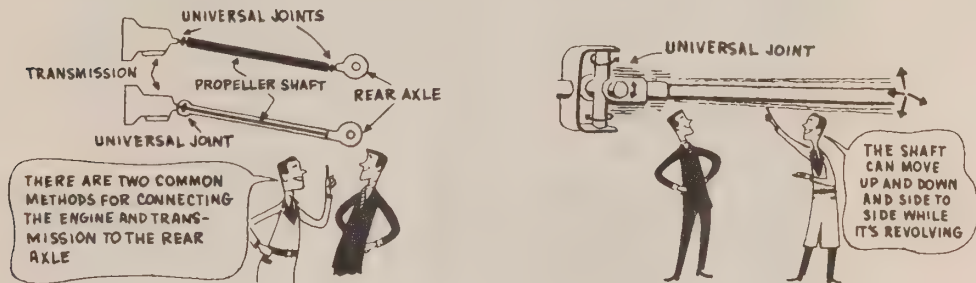


5. Driveshaft

The driveshaft is a straight rod from the transmission to the differential. It revolves when the engine is running, the gears are meshed and the clutch engaged.

6. Universal joints

The driveshaft is connected to the transmission and differential by universal joints. This flexible connection allows the shaft to adapt itself to the bumps and bobbing of the rear wheels.

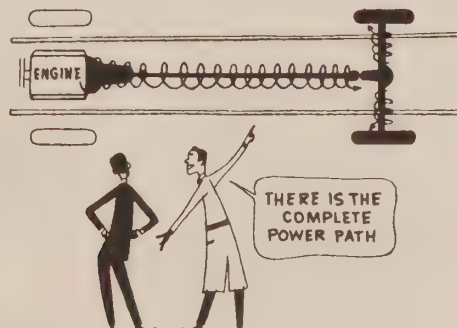


7. Slip-joint

The movement of the rear wheels going over bumps causes the distance between the transmission and differential to change. To compensate for this, a slip joint allows the driveshaft to change its length.

8. Differential and rear axle

The rotary power from the driveshaft is transferred through the differential to the main axle. The complex gear arrangement of the differential also permits the rear wheels to turn at different speeds when the car turns a corner. In doing this, the wheel on the inside of the turn slows down while the one on the outside increases speed.



A. Nature's Laws

Laws made by nature are constant and automatic. These laws are of such importance that it is impossible to become an intelligent driver without understanding and utilizing these laws.

1. Friction

The car is controlled mainly by the amount of friction existing between the tires and the road surface upon which the tire has contact. These four contact points are slightly larger than the palm of the hand. When this friction is sufficient to counteract other forces, the driver has control of the car. If the other forces are greater than the friction the driver ceases to control the car. The amount of friction available for controlling the car depends upon the condition of the road surface, tires and brakes.



2. Centrifugal force

Centrifugal force is another natural phenomenon that is at work when a car is rounding a curve. The amount of force will vary according to the speed of the car, the slope and sharpness of the curve. Speed is the one factor which the driver has control over and is of prime importance.



3. Momentum

Momentum is the force that keeps the car rolling even when the foot has been removed from the accelerator. Momentum is increased with speed and requires body friction to reduce or bring an object to a stop.

4. Gravity

The stopping distance of a car depends, to a certain extent upon gravity. A portion of the force for stopping must be used to overcome the pull of gravity. The gravitational pull increases with the steepness of the hill thus increasing the stopping distance.

5. Force of impact

The force by which one object strikes another object is known as the force of impact. This force is determined by the speed of the moving object, the amount of resistance at the point of impact and the weight of the object. If the speed is doubled

the force of impact is quadrupled, when the speed is tripled the force of impact is nine times greater. The weight of the object is also a determining factor, as doubling the weight also doubles the force of impact. The force of impact determines the force with which a passenger is thrown forward.

B. Basic Man-Made Laws

Many traffic laws developed from custom which were later written down as laws and rules of the highway. These rules promote uniform driving habits. Each province has been responsible for developing the laws governing its own highways. However, it is important that many of these rules of the road be uniform from province to province to avoid confusion.

1. Uniformity of rules of the road

The rules of the various provinces have a marked similarity. This has been brought about through the efforts of motor vehicle administrators, agencies and legislators. Some guidance has been received from the Uniform Vehicle Code established in the United States and efforts are being continued to make all traffic laws as uniform as possible throughout Canada.

2. Attitude, observance and enforcement

Traffic laws are designed with a view to be protective. Some drivers fail to accept responsibilities of driving: This failure is shown as a poor traffic attitude. We must keep in mind that no law will ever be successful unless the majority of the people obey it of their own free will. Traffic officers are useful only in protecting drivers and pedestrians and their major goal is to have the public voluntarily observe the rules. Strict enforcement of rules in a community is an indication of a lack of observance. Improvement of the enforcement can be brought about only through officer training, intelligent supervision, proper equipment, support of the local courts, public support and adequate salaries and pensions.

A. Physical Fitness of the Driver

A good car may be easily selected but the car is no more safe or efficient than the driver.

1. General health

Good physical health and mental fitness are requirements for driving an automobile. A physician should be consulted if a potential driver has any doubts.

2. Temporary disabilities

Illness, fatigue, under the influence of intoxicants or drugs and emotional upset may cause a temporary limit to a driver's ability.

3. Permanent disabilities

Some permanent disabilities may be compensated for and may not create hazards or interfere with driving. Defective vision can be corrected by eye-glasses. Poor hearing may be overcome by means of hearing aids. Advanced age can produce a slower reaction time and shorter attention span but may be compensated for by reduction in speed and greater driving caution.

4. Effects of toxicants

Any person who drives under the influence of an intoxicant is a major menace. Alcohol is a depressant not a stimulant. Alcohol decreases efficiency and alertness while increasing the driver's confidence. His judgment is markedly impaired and his reactions are slowed down.

B. Psychological Fitness of the Driver

The chief problem of most dangerous drivers lies in the fact that mental, moral and emotional equipment is defective. They have poor attitudes and emotional weaknesses.



1. Problem drivers

- (a) An egoist thinks or acts as though he were the only important person in the world. He looks upon his car simply as another means of expressing himself and his importance. The show-off likes to draw attention to

himself. He is often a frustrated individual using his car to get recognition and a feeling of power that he has been unable to attain by any other means. The show-off wishes to be noticed. He may drive wildly in order to impress any passenger whom he may have in the car.

- (b) The temperamental drivers do not possess the emotional control of normal healthy adults. They place great importance on exaggerated petty annoyances of the moment. The person who cannot control his emotions under the stress of driving in traffic is definitely a traffic hazard. This lack of stability may be indicated by honking the horn incessantly, weaving from lane to lane, abusing the privileges of other drivers and doing many foolish acts. These drivers cannot accept even a minor annoyance.
- (c) The rationalizer is a person who is never ready to accept any blame. He is never ready to admit that he is at fault. Courage is lacking and he is sufficiently clever in producing plausible-sounding arguments to cover up his wrong.

2. The make-up of good drivers

Most of the above driving habits and emotionals can be remedied or at least improved. A new driver must be aware of the proper attitude to develop.

(a) Responsibility

A good driver must realize that his licence to drive is a privilege not a right. Driving requires the utmost attention at all times and goes far beyond the driver's responsibility for himself. He is responsible for the safety of other highway users. Good sportsmanship and fair-sharing must become his greatest desire in driving.

(b) Judgment

Sound judgment enables the driver to make correct decisions and reactions in a constantly changing traffic pattern. This can only be acquired through sound training and an exposure to various driving experiences.

(c) Courtesy

During the day to day activities people are usually most courteous. This quality must carry over to a person's

driving habits if he is to become a safe driver. Too often courtesy is not shown when a driver begins the operation of a car. He alone is master of the car and wishes others to realize his importance. Too often this is shown by discourtesy in driving and is often said to indicate the true nature of the driver.

(d) Defensive driving

Defensive driving is being alert to the actions of other drivers and thus avoiding accidents. A safe driver is always aware of all other vehicles and usually has an "out" in case another driver is headed for an accident.

(e) Foresight

A good driver is constantly thinking and planning ahead for his next movement. Trouble is avoided by seeing "trouble in the making".



(f) Attention

Controlled attention is an attribute of the mature driver. Anyone who is unable to keep his attention on his driving for long periods of time is not fit to drive a car.

C. Reaction Time and the Driver

No driver in any car can "stop on a dime". Minimum stopping conditions under ideal conditions depends on the time in reacting to applying the brakes and the braking distance.

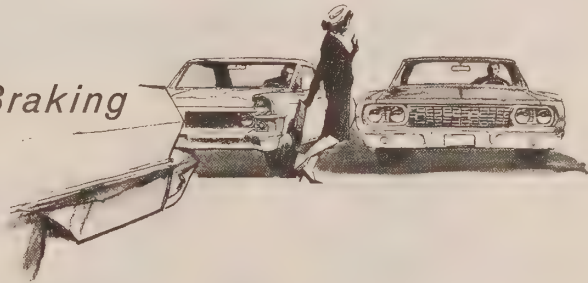
1. Reaction time

This is the time required to react to any situation. The distance travelled by the car during this time is called the reaction distance. The normal reaction time is assumed to be three-fourths of a second. This will vary with the driver's physical and mental condition. Various other factors such as distraction, fatigue, alcohol, age and emotional upset may lengthen this period of time.

2. Braking distance

A car continues its forward movement once the brake is applied until there is sufficient friction to use up its kinetic energy. Braking distance is the distance covered by the car from the point where the brake is applied until the car ceases to move. This distance depends upon the speed of the car, the condition of the brakes, tires and road surface. The reaction time distance and the braking distance make up the total stopping distance.

Brakes and Braking



3. Danger zone

The danger zone is the distance within which the car will not be able to stop in case of an emergency. Speed, road surface, tires, brakes and condition of car and driver greatly control the danger zone. The danger zone should always be no less than the distance which the driver considers will be free of hazards.

D. Testing Equipment

Psychophysical tests are in most cases valuable in that they enable the student to realize his limitations and to learn how to correct or compensate for them. These tests should not be used as the sole criterion in testing one's driving ability. While it is most desirable for a person to have normal hearing and vision, there is no definite correlation between these attributes and safe driving practices.

1. In administering these psychophysical tests, the instructor should:

- (a) Give brief but thorough instruction.
- (b) Demonstrate the test and allow the student several trial practices.
- (c) Keep everything uniform for all students tested.

2. Listed below are some of the tests most widely used:

- (a) Visual Acuity.

This is used to detect common visual defects as far -- or near-sightedness.

- (b) Field of Vision or Peripheral Vision

The test is used to determine the area that a person can see on each side of him while he is looking directly ahead.

- (c) Depth of Perception

The judgment of distance and space is tested by this means.

- (d) Colour Vision

This is used to test a person who is likely to have difficulty in distinguishing between the various coloured lights in controlling traffic and warning signals and highway signs.

- (e) Reaction Time

This test measures the amount of time it requires a person to move his right foot from a simulated accelerator to a simulated brake pedal in response to a controlled stimulus.

- (f) Glare Recovery

This test measures the ability to recover from the effects of bright lights.

A. Accident Facts

1. The age groups of 0-14 and over 65 have more accidents than any other age group.
2. More pedestrians are injured in traffic accidents in the age group 0-14 than in all other age groups.
3. Pedestrians between the ages of 15-35 have the lowest fatality rate.
4. The two most dangerous pedestrian acts are:
 - (1) crossing between rather than at intersections and
 - (2) Walking or running between parked cars.

B. Safety Suggestions

1. Avoid hurrying when crossing through traffic.
2. When streets are slippery, extra time should be allowed in judging movements for safety.
3. When worried or distracted, stop and collect your thoughts before proceeding.
4. When it is dark or raining wear something white or reflective or carry a light.
5. Always look carefully in all directions.
6. Be willing to share traffic responsibility with the motorist.
7. Use judgment and do not trust the driver too far regardless of who has the right of way.



"BYE, BYE, MADGE. SEE YOU IN CHURCH."

A. Sociological Effects

1. Changes in mode of family living

The Canadian family has come to depend upon the automobile. While the automobile has made life much easier and enjoyable, it has also made it complicated and full of annoyances, inconveniences and hazards.

(a) Suburban living

The automobile has made it possible to develop the suburbs and commute considerable distances to work.

(b) Flexibility of family unit

In many ways the automobile has changed the close-knit family unit into a more independent and flexible group of people. Family disputes develop over the use of the car and often financial problems are created because of the burden of owning a car. On the other hand the family automobile has added to the family leisure time activities. It is possible for the family to go on outings and take trips together.

2. Changes in standard of living

The invention and improvement of the automobile has raised the standard of living of the people. The trucking industry has made possible the rapid transportation of fresh fruits and other perishable goods. The conveniences and activities of the city have become available to the country dweller.

B. Economic Effects

1. Employment

The automobile is now looked upon as a national necessity as shown by the number of vehicles in use on Canada's streets and highways. Automobile manufacturers predict 110 million vehicles may be in use by 1975.

The service maintenance requirements of these millions of vehicles have created a major business that is steadily growing each year. The refining and production of oil and gasoline the manufacturing of tires and rubber parts for cars, trucks and tractors, the highway engineering and construction and the bus and trucking transportation are industries developed as a result of the automobile.

2. Travel

The coming of the motor age made a whole new world open to Canadian families. This has made necessary the development of tourist resorts, hotels and a boom in the motor court business. This has led to the opening up of Canada and the employment of thousands of people.

C. Responsibility of Ownership

1. Car purchase

Next to the purchase of a home or business the largest sum of money in a family will be spent in buying and operating a car.

(a) Purchasing a used car

In the purchase of a used car keep in mind that a shining, bright exterior is no indication of the running condition of the motor. Deal only with a reputable dealer. Try, if possible, to obtain a full history of the previous owners. Drive it, paying special attention to the brakes, the steering, tires, motor vehicle inspection record. If possible have a mechanic of your own choice inspect the vehicle.

(b) Purchasing a new car

The advisability of the purchase of a new car depends upon a person's budget. Consider the basic features of safety, weight, power, design, resale value, availability of service, financing plan, operating and repair costs.

2. Registration and licensing

After purchasing a new car, the purchaser must obtain a certificate of ownership from the seller. In order that this vehicle be registered, a certificate of insurance is required in Motor Vehicle Ordinance, Chapter 22 Part I, 6, (a) and (b).

3. Car insurance

Few motorists would slide behind the wheel of an automobile to day without adequate insurance. Safety responsibility laws make it obligatory for the motorist to show proof of his ability

to pay for injuries or damages if he should have an accident - or lose his driver's licence. Auto liability insurance is the most practical means of discharging the requirement.

Various types of insurance:

- (a) Public liability and property damage insurance is carried to protect the lives and the property of others. The minimum amount of the responsibility varies from province to province and state to state, but a representative policy provides for \$10,000 for death or bodily injury to one person; \$20,000 for death or bodily injury to more than one person; \$5,000 for damage to property.
- (b) Collision insurance pays for the damage to the owner's car if caused by collision or upset. Collision insurance can be obtained in various sized deductible policies.
- (c) Comprehensive insurance pays for any damage to the automobile, including breakage of glass and loss caused by missiles, falling objects, fire, theft, explosion, earthquake, windstorm, hail, water, flood, vandalism, riots or civil commotion.

Public liability and property damage are essential if an automobile is to be operated in the Northwest Territories. The other areas of insurance are for the protection of the owner's property.

4. Maintenance of car

Every car should have the following parts in good condition:

(a) Brakes

Keep brakes adjusted. The braking power should be equal on all four wheels.

(b) Tires

Inspect the tires frequently for cracks, cuts and blisters in the sidewalls; check the spare tire and follow automobile manufacturer's recommendations concerning tire pressure.

(c) Steering wheel

Note the steering wheel play. When the car is standing still there should be no more than two inches of play in the steering wheel.

(d) Lighting system

Check headlights, tail lights and turn indicator lights; also keep headlight and tail light lenses clean.

(e) Power Plant

- (1) Lubricate the car according to the instruction manual. Avoid heavy lubricants in cold weather.

(2) Cooling system

Proper engine temperature should be maintained. If the motor overheats, a competent mechanic should inspect the cooling system.

(3) Ignition system

The battery should be kept filled with water (preferably distilled water). Have the spark plugs checked and cleaned. The distributor points should be inspected and replaced if indication of wear is noted. Be certain the generator indicator does not show discharge when the motor is running above idle speed. Check the fan belt frequently to see that it is not cracked or loose.

(4) Fuel system

Keep the air filter clean and have the carburetor and fuel pump checked to see that they are working properly. Most high compression motors operate better when using high test fuel.

(5) Exhaust system

Muffler and tail pipe should be inspected frequently for cracks and holes. Carbon monoxide poisoning is often caused by faulty exhaust systems.

(f) Heater and defroster

Make certain that you know how to operate the heater and defroster.

(g) Windshield wipers

Worn blades should be replaced by new ones and the tension on the blades checked.

(h) Horn

Check the horn occasionally to see that it is working and also free of dirt and snow.

(i) Exterior of the car

If the exterior of the car is washed regularly, waxed and polished according to the type of finish, the resale value will likely be greater than if no care is taken of it.

5. Time chart of maintenance

(a) While driving you should check:

1. Gauges
2. Steering wheel play
3. Brakes
4. Lights (at night)
5. Heater and defroster
6. Windshield wipers
7. Horn

(b) When you purchase gasoline you should have:

1. Windshield and windows wiped clean
2. Headlights and tail lights wiped clean
3. Oil level checked
4. Liquid in radiator level checked and tested if desired
5. Water level of battery checked
6. Air pressure of tires checked

(c) At 1,000 miles: (Unless guaranteed for longer period)

1. Lubricate chassis, body, distributor and generator

2. Change oil (depending on conditions)
 3. Check tires
 4. Check differential and transmission - add lubricants if needed
 5. Check exhaust system
 6. Check air cleaner (clean if necessary)
 7. Check brake fluid level
- (d) At 5,000 miles (unless guaranteed for longer periods)
1. Rotate tires, balance and align front wheels
 2. Check and adjust brakes (unless self-adjusting)
 3. Replace oil filter
 4. Replace spark plugs
- (e) Fall check-up consists of:
1. Clean and flush cooling system
 2. Check all hoses and connections
 3. Add anti-freeze
 4. Change thermostat for winter
- (f) Spring check-up consists of:
1. Drain cooling system
 2. Clean and flush cooling system
 3. Check all hoses and connections
 4. Change thermostat

A. Highways of the Present

1. Expressways, parkways, freeways

The chief purpose of the expressway, parkways or freeways system is to provide for the rapid movement of large volumes of traffic at high speed from areas to areas and across the city. Direct access to properties is usually not provided. A parkway usually excludes truck travel.

2. Arterial roads and highways

These are usually roads to provide movement from traffic generating areas and to link expressways or to feed traffic to the center of a city.

3. Collector-distributor streets

The function of these streets is to collect or distribute traffic within a section or area from the arteries to blocks of properties.

4. Local or residential streets

These streets are planned for slow speeds with a small volume of traffic. Stopping, parking and turning are usually permitted. Truck traffic is usually kept to delivery servicing.

5. Road surfaces

- (a) Earth
- (b) Gravel
- (c) Asphalt or bituminous concrete
- (d) Concrete

6. Modernizing highways

(a) Foundations

The sight for the highway is graded and planned to eliminate low spots and eliminate the removal of steep hills for safety and proper drainage.

(b) Non-reflecting surfaces

During bright sunny days the light reflection from the surfaces may cause eyestrain. Surfaces are often tinted or blacktopped.

(c) Adequate widths

Eight foot lanes were standard lanes in 1915. Today twelve foot lanes are standard in most provinces. This additional width lessens the strain and allows for veering in case of accidents. Eight to twelve foot shoulders provide emergency use for vehicles and pedestrians.

(d) Safe sight distances

In order that drivers be able to see far enough ahead, dips and steep hills have been eliminated, trees have been removed and the widths of the shoulders has been increased.



(e) Divided highways

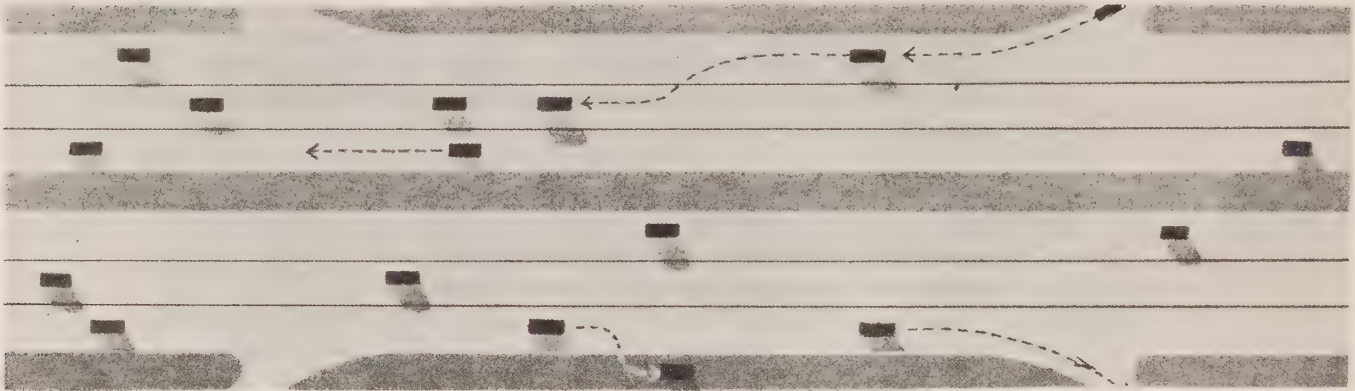
Centre or median strips have been provided separating the highway into two one way roads. At least two lanes are provided in each direction in order that cars can overtake and pass.

B. Highways of the Future

Because of the tremendous number of cars on the highways since the end of World War II, the roads of today are becoming as obsolete as the dirt or grass trails of the past.

1. Expressways

In order to accommodate the present day traffic through highways are being built to run under, over or around the cities.



The Canadian government entered into an agreement with the provinces in 1949 for the construction of a highway from coast to coast. Much of the highway runs through completely new country. By provinces the Trans-Canada Highway will cover the following mileage:

British Columbia	568 miles
Alberta	282 "
Saskatchewan	406 "
Manitoba	309 "
Ontario	1453 "
Quebec	398 "
New Brunswick	390 "
Nova Scotia	318 "
Prince Edward Island	71 "
Newfoundland	540 "
National Park	140 "
TOTAL	4875 "

3. International highways

International highways are also necessary to make it possible to link countries and continents. The Pan American and the Alcan Highways are not just a dream - they are a beginning.

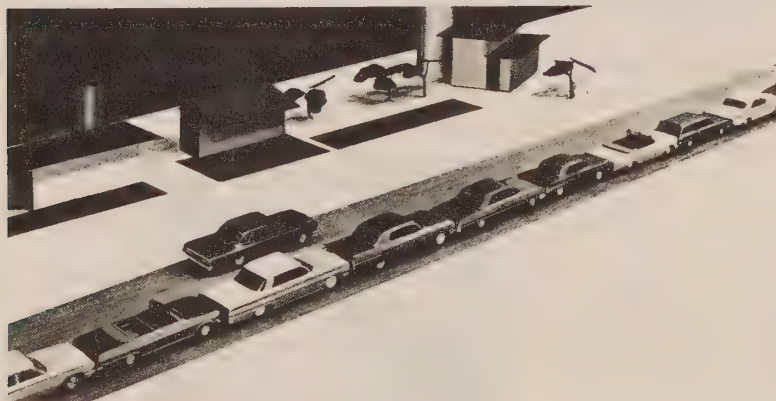
A. Highway Driving

1. Speed

To determine a safe maximum speed a driver must consider legal limits, the weather, traffic, road conditions, condition of the car and physical condition of the driver. Although you may have an open highway ahead of you it must be remembered that most rural accidents occur on the straight road.

2. Passing

A good driver will never attempt to pass another vehicle unless he is certain that he will have adequate time to return to his side of the road. A passing speed of 10 to 15 m.p.h. faster than that of the car being passed should be attained.



3. Curves and hills

On the approach to a curve, speed should be reduced enough to permit the driver to accelerate as he rounds the curve. Light acceleration will increase the traction but speed should not be attempted until the car has come out of the curve. A hill provides two hazards. The driver cannot see over the crest of the hill and the braking distance will increase once the crest is passed.



4. Intersections

Even though intersections are adequately marked and the speed controlled it is most imperative that the driver reduce his speed and remain alert.



5. Roadside

Service station driveways, sideroads, intersections, etc., all present potential danger to the motorist. A driver must never disregard these danger points. The condition of the shoulder of the road as to roughness, holes and softness particularly in the spring of the year must be considered.

B. City Driving

1. Speed

In the cities the traffic pattern is constantly changing because of the time of day and the area. A driver must be ready to change his speed according to this traffic pattern.

2. Intersections

(a) Right-of-way

A driver must know the right-of-way regulations and be ready to yield if necessary. Pedestrians should be given the right of way.

(b) Turning corner

To turn a corner the following steps are necessary:

1. get into the proper lane
2. signal the intention to turn
3. reduce speed
4. observe the right of way and
5. stay in the proper lane all through the turn

(c) Speed control

A car should have reached the point of slowest speed before it enters the intersection. After entering, the driver should leave the intersection as soon as possible.

3. Driving in the proper lane

On multiple-lane city streets, as on the highway, a good driver will drive in the right lane except when passing or turning to the left. Before changing lanes a driver must plan and check

the traffic. It is permissible to pass on the right, but extra precaution must be taken in so doing.

4. Pedestrians

All drivers are pedestrians at times but not all pedestrians are drivers. The latter do not understand the problems which confront drivers. Jay-walkers must be given the right of way, even though they are indicating careless and discourteous attitudes.

C. Expressway Driving

1. Speed

To prevent congestion on expressways every driver should keep his speed constant with the flow of traffic. The slower traffic should keep to the right. High speeds require strict attention to the conditions ahead.

2. Passing

Passing a vehicle on an expressway is much safer than on a two lane highway. The driver must check the traffic before moving into the passing lane and check the "blind spot" to make certain that another car is not about to pass him.

3. Entering and leaving an expressway

On entering an expressway a driver must yield the right of way to the vehicles on the expressway. If there is an acceleration lane he should gain speed quickly and attain the common traffic speed as soon as possible. On leaving the expressway, the driver must get into the proper lane well in advance of the point of exit. The turning signals should be given and the deceleration lane used if one is present.



D. Driving Under Adverse Weather Conditions

1. Conditions which affect visibility

In driving through fog, rain, snow and dust the visibility of the driver is reduced in varying degrees. To compensate for these conditions, speed must be reduced and extra precautions taken. Fog lights, lower beam of the headlights, good ventilation, defrosters and well-fitting blades on the windshield wipers will produce the best visibility possible under these conditions.

2. Conditions which affect traction

Traction will be reduced by wet pavements, whether due to rain or melting snow. Braking distance will be increased because of the lack of grip. These are conditions under which good judgment is needed to avoid skidding and sliding into curbs and other cars.

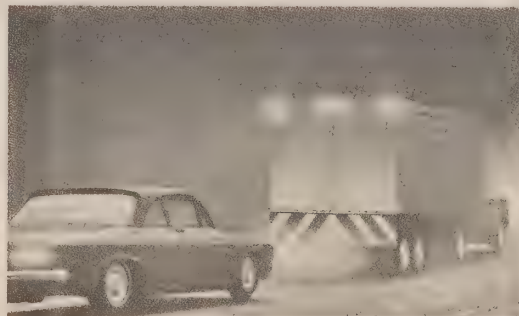
In standard transmission cars the engine compression can be utilized to slow down before brakes are applied. In starting on slippery surfaces, 2nd or 3rd gears may be used to avoid spinning the wheels. In case of a skid the driver should turn the steering wheel in the direction of the skid; he should not apply the brakes or disengage the clutch.

E. Driving at Night

Poor visibility is one of the main problems of night driving. A poor driver "overdrives his headlights". The lower beams of the headlights should be used under the following circumstances:

1. When following another car on a highway.
2. On lighted highways.
3. When approaching another car on the highway.
4. In city driving.

Night Driving



NORTHWEST TERRITORIES DRIVER INSTRUCTION PROGRAM

PART VI

BEHIND THE WHEEL INSTRUCTION

"Behind the Wheel" has only one significance in the language of Driver Instruction Program. It is the placing of an individual in the driving position in an automobile.

This part of the course should be correlated with the classroom area of instruction. Both are needed to equip the student for a lifetime of safe driving.

Standards

The standards in the classroom and in the car must be kept equally high. The voluntary nature of the program requires the instructor to display a continued enthusiastic approach to both the classroom and the behind the wheel instruction. There can be NO half measures and NO shortcuts and the students must be fully aware of this.

Circumstances may require an instructor to vary his program to meet local needs. It is, however, imperative that each student be given as broad a scope as possible and the principles and skills described in "Sportsmanlike Driving" will be carried out without fail.

The Course

Complete observance of this course will help in establishing a territory wide standard.

Homework

Assignments may be given if the instructor feels that the student will benefit from this extra work. Work should not be assigned as a disciplinary measure. In order to have good public relations the principle must insist that the instructor maintain strict discipline.

Areas For Practice Driving Instruction

A practice area is a space used for practice driving instruction. Such space may be in-street, comprising public streets or highways, or it may be off-street, comprising space specially laid out and enclosed (such as parts of the school or campus grounds, parking lots and the like), from which the general traffic is excluded during hours of use for Driver Instruction. It is important for the school to make appropriate and official arrangements for the use of practice areas. Once the students become proficient they should drive under general traffic conditions.

SYLLABUS
INSTRUCTION LESSON GUIDE

LESSON ONE

For these lessons the class will be broken down into groups of not more than five. Lessons will be given to each group separately.

1. Introduce students to the make, model and trade name of the vehicle being used. Introduce any rules and regulations which the instructor finds necessary for carrying out the instruction of driving.
2. Drive class of five or less to practice area where preliminary training is conducted.
3. Give quick review of first lecture. First lecture includes:
 - (a) Student's comfort in car.
 - (b) Students to co-operate with one another.
 - (c) Explain restrictions if any.
 - (d) Outline any rules set up for the comfort of students.
 - (e) Friendly conversation to be encouraged but there should be no distraction to the person behind the wheel.
4.
 - (a) Explain the safety features - including the operator's personal comfort behind the wheel.
 - (b) Explain responsibility of the driver.
 - (c) Eyes on the road at all times.
 - (d) Instruct re — adjustment of front seat and have student find proper position.
 - (e) Lock doors. Adjust rear mirrors (all adjustments to be made before starting the car).
 - (f) Fasten seat belts.
5. Quick reference to the six controls: steering wheel, gas pedal, gear shift, foot brake, clutch pedal, parking brake. Describe each control for the benefit of the students.

6. (a) Demonstrate use of gear shift of standard transmission using diagrams or models.
- (b) Demonstrate clearly palm up low and reverse gears, palm down for second and high gears.
- (c) Explain the use of low gear, second gear and high gear.
7. Demonstrate the 4 steps in starting a car and explain why:
 - (a) Clutch down to assist starter and battery.
 - (b) Gears in neutral for safety.
 - (c) Switch on - needs electricity to activate the starter; clutch in, always; first start motor; low gear; parking brake off - proceed.
8. Demonstrate friction point. Explain clutch plate mechanism. Draw elementary diagrams - engine and clutch plate - rear wheels and clutch plate apart. Friction point when clutch plates meet. Car in gear, clutch plates meet - car moves forward. Explain and demonstrate results of letting out clutch pedal quickly.
9. Demonstrate brake action. Draw elementary design of brake drums and brake bands and give reason why brakes should not be jammed on. Show how one should "squeeze" the brake for smooth stops.
10. Each student is to be given equal turn behind the wheel. Short periods of time are preferable during the initial stages of the course - 10 to 15 minutes.
 - (a) Engine to be started correctly two or three times.
 - (b) Safety aids to be checked and proper seating position established.
 - (c) Dry shifting gears to be practiced.
 - (d) Have student move car forward a short distance in low, then stop. Use same words:

Friction point (meaning to let the clutch out)

Clutch in (after moving a short distance)

Slow brake (gentle pressure to be applied)

- (e) Repeat starting performance without worrying about the techniques of steering.
- (f) Make circuit in training area in low gear and then stop.
- (g) Demonstrate stepping up into second gear.
- (h) Move in a circuit commencing in low, stepping up speed for second gear and instruct in change: Palm of hand over, push lever forward into neutral and then into second. No gear clashing.
- (i) Explain co-ordination of clutch pedal and gas pedal.
- (j) Make third circuit this time changing from low to second and then to high gear.
- (k) Explain stopping in high gear — brake on first, stopping in other gears — clutch in first.

ALWAYS TALK QUIETLY - in conversational tone.

GIVE ENCOURAGEMENT - Repeat sequence verbally until students can perform smoothly. Watch very carefully to avoid clutch damage. Do not become excited and be prepared to use the duals if necessary. Students gain confidence through the calmness of the instructor.

LESSON TWO

Review lesson one at the practice grounds. Check the student's driving position; i.e., chin down, relaxed, arms without tension.

1. Demonstrate correct method of holding steering wheel — Left hand at the 10 o'clock position and right hand at the two o'clock position.
2. Each student to demonstrate previous lesson, starting car, low, second, high gears and smooth stopping.
3. Have student creep the car.
4. Practice placing car in reverse gear and backing, demonstrating proper position in car when performing their manoeuvre. Have car stopped at a definite point.
5. Practice hand-over-hand steering in open practice area, student choosing own course. Explain proper recovery of steering wheel after each turn. Figures of eight are good. Have them tell you in advance where they are going.

LESSON THREE

1. Student to take wheel and drive car from meeting point. Drive to practice area and get feel of car by hand-over-hand steering at will.

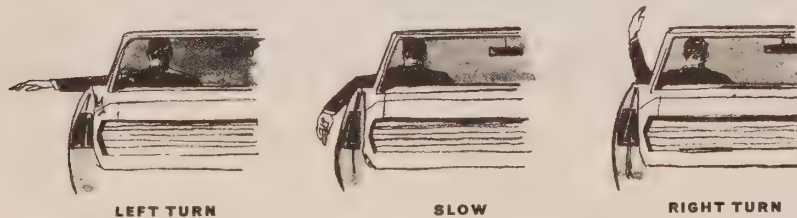
2. Stop car and conduct study by pointing out the car systems:

Oil	(lubricating)	Steering
Ignition		Braking
Water	(cooling)	Exhaust
Gasoline	(fuel)	Lighting

WARNING - Car to be safely placed. Engine off and keys in the hands of the instructor. Brake (parking) on.

Trace these systems for the benefit of the students and show as much as possible the action of each system.

3. Students to drive to suburbs free of traffic for practice street driving.
4. Practice stopping at curb - Practice Driving Guide #3.
5. Instruct on signalling with hand signals and then with manual signals. Explain when to signal and what signals to give, particularly the stopping signal.



Our Own Signs and Signals

6. Practice stopping at intersections, demonstrating the proper place - creeping on when necessary for safety, also demonstrate the safest way to proceed through an intersection looking in the necessary directions.

LESSON FOUR

Lanes and turns

1. Student to drive to suburbs.
2. Teach lane driving - driving straight ahead with eyes on the road at all times.
3. Teach the value of looking back over your shoulder when lane changing, making use of the rear view mirror at all times and teach speed control particularly when turning corners.
4. Instruct on left turns.
5. Instruct in gearing down to second gear when necessary in making turns to maintain full control of the vehicle. Refer to nature's law (centrifugal force).
6. Practice right turns. Demonstrate proper approach to corner, distance from curb, position of car bumper before making the turn and right angling instead of making sweeping curves.
7. Demonstrate that rear wheels do not follow the tracks made by the front therefore it is essential to always make a proper right-hand turn.
8. Instruct in the right-of-way rules.
9. Instruct in the proper method of making a "U" turn, but advise that backing up a vehicle and "U" turning should be avoided if possible. These are two dangerous manoeuvres.
10. Instruct in the safest way - entering a street from a lane and moving on to a thoroughfare from a private roadway, out of a garage, etc.

LESSON FIVE

Country Driving

1. Instruct student on route to take in order to reach a provincial highway. If possible let student use initiative. Correct any driving errors en route.
2. Instruct student on control of speed and during the driving, explain necessity of eyes on the road and where they should be focussed.

3. Northwest Territories Ordinances to be made clear:

Lights: when put on and off

Lights: clearance

Lights: distance when they should be dimmed

Lights: dimmed when following speed limits

Signs: explain shapes and meanings

White lines and their meanings

Orange or yellow lines and their meanings

Following distances

Skill in overtaking and passing and when to pull back into lane

What to do if a tire blows

What to do in case of a skid

4. Demonstrate use of dimmer switch

5. Have students watch and report gauges

6. Have students make proper use of rear view mirrors

7. Instruct on the safest method of reversing on a highway by use of a side road, keeping face to the traffic at all times.

8. Demonstrate changing of a tire with students participating

9. Explain the equipment which should be carried in a car for emergencies;

First aid kit

Tire block

Flashlight

Jack and tire tools etc.

Old gloves

Fire extinguisher

Tin of gravel

10. Discuss carbon monoxide poisoning.

LESSON SIX

City Driving

Have student in traffic as much as possible and encourage proper judging of distances.

1. Driving in traffic
2. Proper control of vehicle at traffic lights
3. Selection of proper lane at intersections
4. Practice pulling into curb
5. Practice proper method of entering traffic stream from curb
6. Instruct on stopping and starting on a hill
7. Instruct proper method of parking car on incline
8. Instruct re crossing of railroad tracks (no changing gears when crossing tracks; looking both ways, etc.)
9. Instruct in angle parking
10. One way street driving

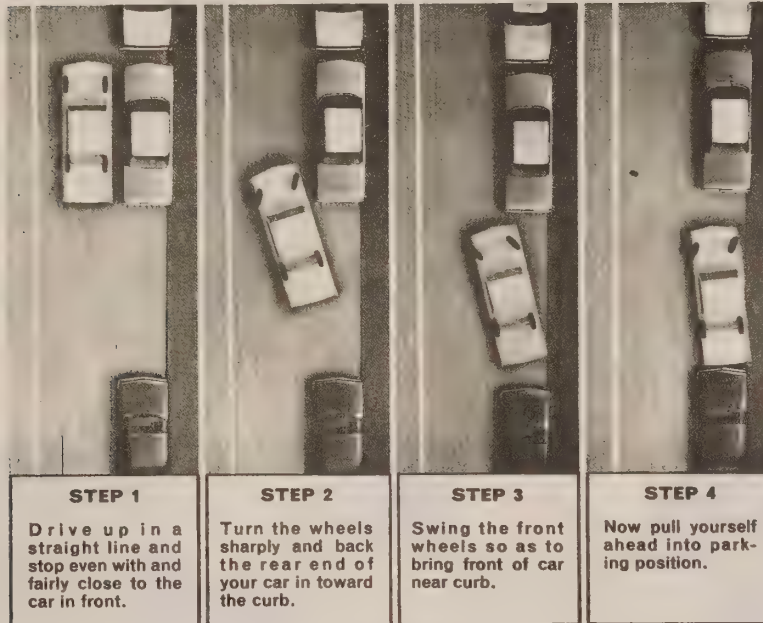
LESSON SEVEN

City Driving - continued

Continue student's instruction in traffic.

1. Surveying the whole traffic picture
2. Explain defensive driving
3. Coming to a stop on icy street
4. Demonstrate parallel parking and have the student practice

5. Driving in downtown traffic
6. The service station and service station attendant
7. Parking facilities



Parking

8. Instruct that in no way should a motorist inconvenience another

LESSON EIGHT

1. Have student drive to practice driving area where course began and travel over the course of instruction from the first day in the car, going over smooth starting and stopping; turning, backing and "U" - turning; lane driving, pulling into a curb, stopping and starting on a hill; angle parking and parallel parking; safety at intersections; traffic lights, etc.
2. Expand on the training by using films, illustrations and explanations to familiarize the students with the problems encountered in driving in large cities. Use may be made of city maps to make the students aware of the complicity of driving in such areas.
3. Impress on the students a sense of accomplishment and leave with that student the desire to operate a vehicle in a sane and courteous manner.



NORTHWEST TERRITORIES
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PART VII

TESTS AND RECORDS

1. Psychophysical Tests

It is beneficial to use these tests if possible. This testing equipment may be obtained on free loan from:

Director of Safety Education,
Highway Safety Branch,
Department of Transport,
Parliament Building,
Toronto 2, Ontario.

or it may be purchased from:

American Automobile Association,
1712 G. Street N.W.,
Washington 6, D.C.

A qualified instructor will know how to operate these pieces of equipment and therefore it will not be covered here.

2. Academic Tests

Any good course will give tests to make sure the student is learning the work. The American Automobile Association which pioneered this whole programme, has prepared a group of tests which will cover the textbook. They are multiple choice and they are very easy to mark. Thus it will take little of the instructor's time to grade papers if this method is used.

The tests, the answer sheets and the marking key may be obtained from the Ontario Department of Transport. It is hoped every school which joins in Driver Instruction will strive for high standards. The following scale of grades will be accepted as a basis for all courses.

Proposed Grading Scale

90 - 100 marks	"A"	Excellent	
80 - 89	"	"B"	Very Good
70 - 79	"	"C"	Good
60 - 69	"	"D"	Fair
50 - 59	"	"E"	Poor
Below 50	"	"F"	
			Satisfactory
			Work
			No certificate
			awarded

Since this is a non-academic course, it would be well for the instructor to try to arrange for missed tests to be written at a time convenient to himself and the student. If a course schedule is set out (See part 2, example 4) this will help to have the students on time for the tests.

The test marks too, should be entered on the Students' Record Card and these should be readily available when the Inspector calls at the school.

3. Road Tests

This road test is not designed to replace the required road test of the R.C.M.P. However, it may be used as a basis for the instructor to judge the competence of the student before taking the test. Such a road test is often used as a warm-up to the regular Driving Examination.

The individual Record Card (Form #6) leaves a space for such a road test. It is hoped that this final test will help the instructor to clearly decide on the future capabilities of this student.

To assist the instructor a Road Test Score Sheet is attached and this can form the basis of this test. It is a two part test — the first part is designed to rate the skills and it allocates a total of 200 points. The second part tries to judge attitude and this amounts to a total of 75 points. The second part shall be deducted from the score in the first part. It is considered highly essential that the student develop first-class attitudes behind the wheel, therefore it is obvious that should the student be expert in driving skills yet wanting insofar as attitude is concerned, he disqualifies himself from the high pass grades.

Rating Standards — Road Test

180 - 200	points	"A"	Excellent		
160 - 179	"	"B"	Very Good		
140 - 159	"	"C"	Good		
120 - 139	"	"D"	Fair		
100 - 119	"	"E"	Poor	→	Suggest Retest
below 100	"	"F"	Fail	"	"

This test time may be counted as part of the behind-the-wheel time.

Suggested Road Test Forms

NAME DATE

SCHOOL INSTRUCTOR

Error Check XXXXX	Total Points	Points Deducted
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Part One

1. Car Check		
Checking vehicle before starting	5	
Checking the driver, safety aids, etc.	5	
Starting the engine	5	
2. Starting from Curb		
(a) Incorrect use of controls	5	
(b) Observance of traffic	5	
(c) Fails to signal	5	
(d) Get-away too fast	5	
3. Lane Observance		
(a) Drives in wrong lane	5	
(b) Straddles traffic lanes (if marked)	5	
(c) Weaves from lane to lane	5	
4. Following and Passing		
(a) Fails to observe other traffic	5	
(b) Follows too closely	5	
(c) Passes when not safe	5	
5. Turns		
(a) Fails to give proper signal	5	
(b) Fails to get into proper lane in time	5	
(c) Too fast	5	
(d) Incorrect use of controls	5	
(e) Right of way observance	5	
(f) Turns too wide	5	
(g) Cuts corner	5	
— Steering method and/or control	5	
— In wrong lane on completion	5	
— split Y turns	5	
6. Intersections		
— Fails to notice and/or obey signals	5	
— Blocks intersection and/or crosswalk	5	
— Right-of-way observance	5	
7. Backing		
— Fails to look around before/while backing	5	
— Uncertain steering	5	
— Too fast for proper control	5	

Suggested Road Test Forms

NAME DATE

SCHOOL INSTRUCTOR

	Error Check	Total Points	Points Deducted
<hr/>			
8. Parrallel Parking			
— Fails to observe other traffic		5	
— Hits other vehicle or object		5	
— Too far from curb		5	
— Backs over curb		5	
— Too fast for control		5	
9. Stop/Start on a grade			
— Rolls back when starting or parking		5	
— Fails to angle front wheels		5	
— Fails to set hand brake		5	
— Incorrect use of controls		5	
10. General			
— Too fast for existing conditions		5	
-- Too slow " " "		5	
		<hr/>	
TOTAL		200	

Part Two

						Deduct Maximum	Points Deducted
Inattention	None	0	Part	10	All Time	20	
Nervous, hesitant	No	0	Part	7.5	All	15	
Over confident	No	0	Part	7.5	All	15	
Fails to anticipate hazards	No	0	Part	7.5	All	15	
Fails to follow directions	No	0	Part	5	All	10	
						<hr/>	
					TOTAL		

Part One Score

Part Two Score

TOTAL

GRADE ACHIEVED

Standards

The standards suggested here are certainly attainable and it is hoped that schools will accept these as the minimum.

SAMPLE WRITTEN OR ORAL TEST AS USED BY R.C.M.P.

1. At an intersection at which there is no traffic control, when two vehicles enter at approximately the same time, which vehicle has the right-of-way?
 - (a) The vehicle first into the intersection.
 - (b) The vehicle on the left.
 - X (c) The vehicle on the right.
 - (d) The vehicle on the wider street.
2. Where a railway crossing has automatic traffic signals:
 - (a) The signals apply only to trucks.
 - (b) They mean the same as a flashing amber light.
 - (c) Trucks and buses only must stop.
 - X (d) All vehicles must stop when the signals are operating.
3. Under what circumstances must you stop immediately if you are involved in an automobile accident?
 - X (a) Under any or all circumstances.
 - (b) If the accident involves personal injury or death only.
 - (c) If the accident involves personal injury or death or damage to your property only.
 - (d) Only if the accident involves personal injury or death or damage to any property in excess of \$100.00
4. What should you do when starting down a steep hill?
 - (a) Disengage the clutch.
 - X (b) Shift down to a lower gear and alternately apply and release the brakes.
 - (c) Shift to neutral and use the brake.
 - (d) Use clutch and brake at the same time.
5. After passing a vehicle, do not commence to return to your own lane ahead of the passed vehicle until:
 - (a) You see its movement disappear from your side window.
 - (b) Your signal can be seen.
 - (c) You think you have sufficient speed to clear.
 - X (d) You see it is clear from your rear-view mirror.
6. What must you do as you approach an intersection on a two-way street at which you intend to turn left?
 - (a) Pull over to the curb and stop until the street is clear.
 - (b) Signal and get into the lane nearest the right curb.
 - X (c) Signal and get into the lane nearest the centre of the road.
 - (d) Open your left front door to indicate you are turning left.

7. Unnecessary depressing of the clutch or coasting may be dangerous because:
- (a) The motor uses too much gasoline.
 - (b) Without the pull of the motor, the tires may blow out.
 - (c) It prevents you from shifting smoothly.
 - X (d) It reduces control and braking power of the vehicle.
8. If an owner sells a vehicle registered under the Northwest Territories Motor Vehicles Ordinance, he shall:
- (a) Report it to his insurance agent.
 - (b) Obtain a bill of sale.
 - (c) Report it to the R.C.M. Police.
 - X (d) Immediately notify your nearest Motor Vehicle Registration Office.
9. At what distance must headlights be dimmed when approaching an oncoming vehicle?
- (a) 300 feet.
 - (b) 600 feet.
 - (c) 800 feet.
 - X (d) 1000 feet.
10. If you become very tired while driving, what is the MOST desirable thing to do?
- (a) Engage in conversation.
 - X (b) Stop and rest.
 - (c) Allow plenty of fresh air in the car.
 - (d) Drink coffee or strong tea.
11. In pulling away from a parking space along a right hand curb, you should:
- (a) Pull out slowly without looking and go ahead.
 - (b) Look in the rear-view mirror, pull out and go on.
 - X (c) Look out the left window, making sure the street is clear behind you and give a left turn arm signal before you pull out.
 - (d) Pull out slowly and sound your horn.
12. Generally the safest drivers are those who:
- (a) Have the best vision.
 - X (b) Adjust their driving to driving conditions.
 - (c) Have the best reaction time.
 - (d) Do the most driving.
13. A flashing red traffic light means:
- (a) Slow down to ten miles per hour.
 - X (b) Come to a stop and proceed when safe.
 - (c) Stop and wait for a green light.
 - (d) Look left and right and drive on if road is clear.

14. Must you come to a stop before entering a main highway, at which there is no traffic control?
- (a) Not if the approach is slippery.
 - (b) Only if traffic is coming.
 - X (c) Yes, at all times.
 - (d) I need not stop.
15. A flashing amber traffic light means:
- X (a) Slow down and proceed with caution.
 - (b) Go ahead at the same speed if no cars are near.
 - (c) Come to a stop.
 - (d) Blow your horn before crossing.
16. When must lamps be lighted when a motor vehicle is in motion on any highway.
- (a) Between $1\frac{1}{2}$ hours after sunset and $1\frac{1}{2}$ hours before sunrise.
 - X (b) Between sunset and sunrise.
 - (c) Between $\frac{1}{2}$ hour after sunset and $\frac{1}{2}$ hour before sunrise.
 - (d) Between 6:00 p.m. and 6:00 a.m.
17. Where a number plate issued under the Northwest Territories Motor Vehicle Ordinance, is lost or destroyed, what is required?
- (a) Report it to the R.C.M. Police.
 - X (b) Forthwith apply to the Commissioner for new number plates.
 - (c) Report it to your insurance agent.
 - (d) Nothing is required.
18. No person shall allow his chauffeur's or operator's licence:
- (a) To become worn or defaced.
 - X (b) To be used by another person.
 - (c) To expire.
 - (d) To be shown to a police officer.
19. On extended loads, red flags in the daytime are required if the load or projection on the vehicle reaches or exceeds:
- (a) 4 feet.
 - (b) 3 feet.
 - X (c) 5 feet.
 - (d) 6 feet.

20. A chauffeur's licence issued under the Northwest Territories Motor Vehicles Ordinance, normally expires on:
- (a) One year from the date of issue.
 - (b) On your birthday.
 - X (c) On the 31st of March.
 - (d) On the 1st of January.
21. Are you permitted to exceed the speed limit when passing a vehicle travelling in the same direction?
- (a) Yes, if traffic conditions are favourable.
 - (b) Yes, if road conditions are favourable.
 - (c) Only if both traffic and road conditions are favourable.
 - X (d) No.
22. If the rear of your vehicle skids on a slippery surface, you should:
- (a) Turn the steering wheel in the opposite direction of the skid.
 - X (b) Turn the steering wheel in the direction that the back end is skidding and reduce speed.
 - (c) Use the clutch and brake at the same time.
 - (d) Apply the brakes and ease up on the steering.
23. On Northwest Territories highways, what is the basic maximum speed during the night for trucks over 8000 pounds maximum weight?
- (a) 55 m.p.h.
 - X (b) 50 m.p.h.
 - (c) 60 m.p.h.
 - (d) 40 m.p.h.
24. Is it permissible to pass a bus, van or other vehicle that is operated for the transportation of school children and that is clearly marked as such which is stopped to receive or discharge passengers?
- (a) Yes.
 - X (b) No.
25. Why do you think low rates of speeds are stipulated in school zones?
- ANSWER: Because of presence of children going to and coming from school.

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PART VIII

TEACHING AIDS AND RESOURCES

1. Textbooks and Work Books

- Sportsmanlike Driving, Canadian Edition, Canadian Automobile Association, Ottawa.
- Project Workbook in Driver Education. American Automobile Association Washington, D.C.
for use with Sportsmanlike Driving.
- Learning To Drive, Bostwick, H.S., Boodish, M.M., and Rodini, B.T. Bruce Publishing Co., Milwaukee. 1955.
- Man and the Motor Car, Sixth Edition, Center for Safety Education, New York University, 1957, Prentice Hall, Inc., Englewood Cliffs, N.J.
- Youth At the Wheel, Glenn, H.T., 1958. Charles A. Bennett Co., Peoria. Illinois.
- Let's Drive Right, Halsey Maxwell, and Silvernale, 1958, Scott, Foresman and Co., Chicago.
- The Road to Better Driving, White, Earnest B. 1955, Cambridge Book Co., New York.

2. Reference Books and Teacher's Manuals

- Teacher's Manual for Sportsmanlike Driving, American Automobile Association, Washington, D.C.
- Teacher's Manual and Unit Tests for Man and the Motor Car, Sixth Edition. Center for Safety Education, New York University. Prentice Hall, Inc., Englewood Cliffs, N.J.
- Those Wonderful Old Automobiles, Clymer, Clyde. 1953 McGraw-Hill Book Company, Inc., New York.
- Traffic Engineering Handbook, Evans, Henry K. (Edition) 1950 by Institute of Traffic Engineers, New Haven, Conn.
- Teacher's Manual for Let's Drive Right, Halsey, Maxwell and others. 1958 by Scott, Foresman and Co., Chicago.
- Driving To-day and Tomorrow, Hyde, Margaret, O. 1954 by McGraw-Hill Book Co., New York.
- How to Drive Better and Avoid Accidents, Kearney, P.W. 1953 by Thomas Y. Crowell, New York.

3. Pamphlets

The following organizations have pamphlets that might assist your course in Driver Instruction. Write and secure a catalogue or list on subjects relating to Driver Instruction.

1. American Automobile Association, 1712 G Street, N.W., Washington 6, D.C.
2. Allstate Insurance Co., 790 Bay Street, Toronto 2, Ontario.
3. Automobile Manufacturers Assoc., New Centre Building, Detroit 2, Michigan.
4. Centre for Safety Education, New York University, Washington Square, New York, N.Y.
5. Chrysler Corporation, Public Relations Department, Windsor, Ont.
6. Ford Motor Company, Public Relations Department, Oakville, Ontario.
7. General Motors, Special Activities Section, Public Relations Dept., Oshawa, Ontario.
8. B.F. Goodrich Company, Kitchener, Ontario.
9. Insurance Institute for Highway Safety, 1725 DeSales St. N.W., Washington 6, D.C.
10. National Commission on Safety Education, National Education Association, 1201 Sixteenth Street, N.W., Washington 6, D.C.
11. National Safety Council, 425 North Michigan Avenue, Chicago 11, Illinois.
12. Ontario Department of Transport, Highway Safety Branch, Parliament Buildings, Toronto 2, Ontario.
13. Union Carbide Canada Ltd., Consumer Products Division, 123 Eglinton Ave., East, Toronto 12, Ontario.

4. Periodicals

1. Driver Education News — Ford Motor Co., Dearborn, Michigan.

5. Films Available

- A. Highway Safety Branch, Ontario Department of Transport, Parliament Buildings, Toronto 2, Ontario.

Partial Listing of Suitable Films -

a complete catalogue will be sent on request.

1. Automobiles
 - (a) Auto U.S.A. 27 mins. col.
 - (b) Cars in Your Life, The 30 mins. b & w
2. Driver attitudes
 - (a) Borrowed Power 19 mins. b & w
 - (b) Chain Reaction 13 mins. b & w
 - (c) Day in Court 29 mins. b & w
 - (d) Emergencies in the Making 15 mins. col.
 - (e) Gentleman Jekyll and Driver Hyde 9 mins. b & w
 - (f) Home at the Wheel 14 mins. b & w
 - (g) Last Clear Chance 30 mins. col.
 - (h) Look Who's Driving 8 mins. col.
 - (i) Motor Mania 7 mins. col.
 - (j) None For The Road 15 mins. col.
 - (k) The Invisible Passenger 15 mins. col.
 - (l) The Sixth Wheel 30 mins. col.
 - (m) Tommy Gets the Keys 20 mins. b & w
 - (n) Traffic Court, U.S.A. 6 mins. col.
 - (o) We Drivers 15 mins. b & w
 - (p) The Right Point of View 23 mins. col.
 - (q) Defensive Driving Tactics 12 mins. col.
 - (r) Highway Highball 12 mins. col.
3. Enforcement
 - (a) As a Matter of Fact 6 mins. col.
 - (b) Day in Court 29 mins. b & w
 - (c) Traffic Court, U.S.A. 6 mins. col.
 - (d) Traffic Police 6 mins. col.
 - (e) Uniform Traffic Laws 6 mins. col.
4. Driver Education
 - (a) City Driver 8 mins. b & w
 - (b) How to Drive 26 mins. b & w
 - (c) Driving the Super Highway 10 mins. b & w
 - (d) Driving Under Special Conditions 8 mins. b & w
 - (e) Milestones to Safe Driving 12 mins. b & w
 - (f) Right From the Start 23 mins. col.
 - (g) Smith System, The 8 mins. b & w
 - (h) Freeway Driving Tactics 16 mins. col.
 - (i) The Last Prom 20 mins. b & w
5. Highway Driving
 - (a) Magic Highway, U.S.A. 29 mins. col.
 - (b) Passing Fancy 14 mins. b & w
 - (c) Look Who's Driving 8 mins. col.
 - (d) We Drivers 15 mins. b & w
6. Miscellaneous
 - (a) Broken Doll, The 20 mins. col.
 - (b) Engineering for Traffic Safety 6 mins. col.
 - (c) Fatal Meeting 14 mins. col.
 - (d) It Takes Two to Crosswalk 8 mins. b & w
 - (e) Safety Through Seat Belts 13 mins. b & w

